DOCUMENT RESUME

ED 138 920 CS 003 329

AUTHOR	Weintraub, Sam; And Others
TITLE	Summary of Investigations Relating to Reading, July 1, 1975, to June 30, 1976.
INSTITUTION	International Reading Association, Newark, Del.
PUB DATE	77
NOTE	342p.
AVAILABLE FROM	International Reading Association, 800 Barksdale Road, Newark, Delaware 19711 (single copies, $3.75)
JOURNAL CIT	Reading Research Quarterly; v12 n3 p239-565 1976-1977
EDRS PRICE	MF-$0.83 HC-$18.07 Plus Postage.
DESCRIPTORS	Exceptional Students; *Literature Reviews; Physiology; Psychology; Publications; *Reading; Reading Difficulty; *Reading Instruction; Reading Interests; *Reading Processes; *Reading Research; Reading Skills; Reading Tests; Sociology; Teacher Education

ABSTRACT

This document summarizes 599 reports of reading research published between 1 July 1975 and 30 June 1976. The research studies are categorized in six major areas, four of which have been subcategorized. The majority of studies reported were classified in the area of the physiology and psychology of reading. Large subdivisions under that major category include the following: visual perception, auditory perception, reading and language abilities, and factors related to reading disability. In the teaching-of-reading category, the testing subcategory is one of the larger divisions. A large grouping of studies in the sociology-of-reading category is concerned with the content analysis of newspapers, books, texts, and other printed materials. A listing of other bibliographies and reviews of reading research appears as the first major category of the summary. Reviews are classified in specific subcategories or are placed under a miscellaneous subheading. Other categories are teacher preparation and practice and the reading of atypical learners. An annotated bibliography appears following the written text. (Author/MKM)

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Reading Research Quarterly Volume XII/No. 3

Published by the International Reading Association.

Number 3, 1976-1977

Summary of investigations relating to reading, July 1, 1975, to June 30, 1976

SAM WEINTRAUB, HELEN K. SMITH, GUS P. PLESSAS,
NANCY L. ROSER, AND MICHAEL ROWLS

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READING RESEARCH QUARTERLY *is published 4 times a year by the International Reading Association, Inc. Individual membership in the International Reading Association is open to anyone concerned with the improvement of reading especially through instruction and supervision in the schools. Annual individual membership dues of $15 include a subscription to 1 of 3 professional journals:* READING RESEARCH QUARTERLY, JOURNAL OF READING, *or* THE READING TEACHER. *Annual dues of $20 include subscriptions to 2 of the journals; and annual dues of $25 to all 3. Institutional memberships are available to libraries and institutions at $15 per journal per year. Applications for all memberships should be sent to Headquarters, International Reading Association, 800 Barksdale Road, Newark, Delaware 19711 U.S.A. Single copies of* READING RESEARCH QUARTERLY *are $3.75. Copyright 1977 by the International Reading Association, Inc. (ISSN 0034-0553) Second class postage paid at Newark, Delaware, and at additional mailing offices.*

Correspondence on editorial matters should be addressed to the Editors, 227 Education Building, Indiana University, Bloomington, Indiana 47401. Send change of address notice (include old label, allow 60 days) and other business correspondence to International Reading Association, 800 Barksdale Road, Newark, Delaware 19711 U.S.A.

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To HMR

Those readers who use the annual summary regularly or even those who use it on an infrequent basis will quickly note one major change in the authorship this year—the deletion of Helen M. Robinson's name. For the first time in over 15 years, Dr. Robinson's name is not associated with the summary. Because of personal commitments, she asked to be relieved of a burden so willingly undertaken for many years.

The summary was originated by William S. Gray in 1925 and shepherded by him until his death in 1960. It is safe to state that the work of compiling it would have ended with his death had not Dr. Robinson made a determination to carry it on at that point. The continued existence, then, of the summary is due to this remarkable woman.

In addition to owing its existence to Dr. Robinson, the present nature of the summary has been strongly influenced by her in other ways also. She is responsible for developing the categorization schema used. Although the research had been placed into major categories by Dr. Gray, the building of the subcategories is another of Dr. Robinson's major contributions to the development of the annual summary. Many smaller refinements, such as the placement of the subcategory number at the end of each citation in the annotated bibliography, are hers, too. These innovations made the summary easier to use.

Dr. Robinson's efforts on the summary are sorely missed. Even so, the work of compiling it is easier because of the various procedures which she instituted. With these thoughts in mind, the authors of the summary wish both to extend their thanks to HMR and to dedicate this issue of the summary to her.

Sam Weintraub
Helen K. Smith
Gus Plessas
Nancy Roser
Michael Rowls

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*Summary of investigations relating to reading July 1, 1975, to June 30, 1976**

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University of Miami

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California State University, Sacramento

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University of Texas

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SUMMARIZES 599 REPORTS of reading research published between July 1, 1975, and June 30, 1976. The research studies are categorized into 6 major areas, 4 of which have been further subcategorized. The majority of studies reported were classified into the Physiology and Psychology of Reading area. Large subdivisions under that major category include the following: Visual Perception, Auditory Perception, Reading and Language Abilities, and Factors Related to Reading Disability. Under the Teaching of Reading category, the Testing subcategory remains one of the larger divisions. A large grouping of studies in the Sociology of Reading is concerned with the content analysis of newspapers, books, texts, and other printed materials. A listing of other bibliographies and reviews of reading research appears as the first major category of the present summary. Reviews have been classified under specific subcategories or placed under a Miscellaneous subheading. An annotated bibliography appears following the written text.

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*The authors are indebted to Charlotte Kauppi, a doctoral student at the State University of New York at Buffalo, for the major work of identifying and annotating articles. Additional help was given by Peter Byron and Nina Lubin, also graduate students at Buffalo. Support for the annual summary came from the International Reading Association.

Résumé des investigations portant sur la lecture, du 1er juillet 1975 au 30 juin 1976

RESUMÉ 599 RAPPORTS dans le domaine de la lecture publiés entre le 1er juillet 1975 et le 30 juin 1976. Les rapports sont répartis sous 6 rubriques principales dont 4 ont été subdivisées à leur tour. La majorité des études a été groupée sous la rubrique intitulée "La Physiologie et Psychologie de lecture". De grandes subdivisions ont été faites sous cette catégorie principale et contiennent les rubriques suivantes: "La Perception visuelle", "La Perception auditive", "L'Aptitude au language et à la lecture", ainsi que "Les Facteurs touchant a l'inhabileté en lecture". Sous "L'Enseignement de lecture", la subdivision ayant trait a l'administration des tests est une des plus nombreuses de toutes les subdivisions de cette rubrique. La plupart des études comprises sous l'enseigne de la sociologie de la lecture se rapporte a l'analyse textuelle de journaux, de livres, ainsi que de divers matériaux de lecture. Une liste d'autres bibliographies et de comptes rendus sur la recherche en matière de lecture parait comme la première catégorie principale de ce volume. Les comptes rendus ont été placés soit sous de catégories spécifiques, soit sous la rubrique "Études diverses". Une bibliographie annotée suit ce text écrit.

Resumen de las investigaciones relacionadas con la lectura, publicadas entre el 1° de Julio de 1975 y el 30 de Junio de 1976

SE EFECTUA UN RESUMEN de 599 informes sobre investigaciones realizadas en el campo de la lectura, publicados entre el 1° de Julio de 1975 y el 30 de Junio de 1976. Los estudios de investigación se clasifican en 6 categorias principales, siendo 4 de ellas, a su vez, subclasificados. La mayoria de los estudios presentados se clasifican dentro del área de la Fisiología y Psicología de la Lectura. Dentro de las numerosas subdivisiones que pertenecen a la categoría principal, se encuentran las siguientes: Percepción Visual, Percepción Auditiva, Aptitud para la Lectura ye el Lenguaje, y Factores Relacionados con la Inaptitud para la Lectura. La subclasificación denominada Examinación, constituye una de las mayores divisiones correspondientes a la categoría de la Enseñanza de la Lectura. La gran agrupación de estudios efectuados en Sociología de la Lectura, se refiere al análisis del contenido de periódicos, libros, textos y otros materiales impresos. En la primera categoría principal del presente resumen, aparece una lista de otras bibliografías y reseñas realizadas en la investigación de la lectura. Las reseñas han sido clasificadas en subclasificaciones específicas, o colocadas bajo el subtítulo de Miscelánea. A continuación del texto aparece una bibliografía comentada.

Introduction

The number of studies cited shows a dramatic increase over last year's summary, continuing the trend noted in each of the past several summaries. Again the number of investigations classified under the Physiology and Psychology of Reading shows the greatest increase over the previous summary and also continues to be greater than that in any other area.

The summary is limited to journals written in English because of the difficulty of monitoring and translating foreign language journals. However, several foreign language journals containing summaries in English are regularly monitored. When such summaries contain sufficient information to abstract them, the report is included.

Readers are also referred to "Research Views," a column appearing regularly in *The Reading Teacher* and containing brief reviews of research.

Each study abstracted in the text of this summary is followed by a number in parentheses which refers to the alphabetical annotated bibliography found at the end of the summary.

I. *Summaries of specific aspects of reading research*

This section lists published summaries of research, including annotated bibliographies, syntheses and analyses of research, and critical reviews of reading research. The summaries have been classified under topic headings whenever 2 or more articles relating to a single topic appear. The *Miscellaneous* category is a listing of summaries where no more than 1 article on a given topic appeared.

I-1 General summaries

1974 Review of research on college-adult reading, by Blanton and Smith (47).

Annotated bibliography of research in the teaching of English: July 1, 1975 to December 31, 1975, by Dieterich (132).

Reading research in Britain—1975, by Goodacre (202).

Reading research 1974, by Goodacre (203).

Research suggestions from the 'Literature Search,' by MacGinitie (354).

A summary of research studies relating to language arts in elementary education: 1974, by Sheldon, Lashinger, Troike, and Mercer (498).

Summary of investigations relating to reading, July 1, 1974, to

June 30, 1975, by Weintraub, Robinson, Smith, Plessas, Roser, and Rowls (579).

I-2 Mass communication

How the challenge of television news affects the prosperity of daily newspapers, by Bogart (50).

Media coverage of children and childhood: calculated indifference or neglect? by Dennis and Sadoff (125).

Television and reading in the seventies, by Feeley (168).

Czechoslovakia's press law, 1967-68: decontrolling the mass media, by Kaplan (282).

Attitudinal change with special reference to the mass media, by Klineberg (303).

The New York City press and anti-Canadianism: a new perspective on the Civil War years, by Kendall (289).

The teaching of reading—a crisis? by Latham (329).

Reading and television in the United States, by Lamb (323).

Literacy training in West Germany and the United States, by Orlow (426).

Changes in inter-ethnic 'attitudes' and the influence of the mass media as shown by research in French-speaking countries, by Guillaumin (221).

Mass media violence and society, by Howitt and Cumberbatch (263).

The media in America, by Tebbel (537).

I-3 Literacy

Adult illiteracy in England and Wales, by Bentovim and Stevens (44).

Literacy in developing countries, by Golub (200).

Toward an assessable definition of literacy, by Hillerich (255).

Reading skills—what reading skills? by Smith (509).

The experimental world literacy programme: a critical assessment, by Unesco Press (554).

I-4 Sex differences

When Johnny can't read but Mary can, men can help, by Gentile and McMillan (194).

Sex differences in language and reading, by Gunderson (222).

Feminized schools—unpromising myth to explain boys' reading problems, by Lahaderne (321).

Sex differences and reading, by Sheridan (500).

Sex differences in reading attainments, by Thompson (539).

Sex of teacher and academic achievement: a review of research, by Vroegh (565).

Reader content and sex differences in achievement, by Zimet (598).

I-5 Text learning

Do advance organizers facilitate learning? Recommendations for further research based on an analysis of 32 studies, by Barnes and Clawson (30).

Functional significance of orienters in prose learning, by Kumar (319).

Immediate feedback less effective than delayed feedback for contextual learning? by Pound and Bailey (442).

I-6 Sexism

Picture books for young children, by Council on Interracial Books for Children (109).

A criticism of sexism in elementary readers, by Fishman (179).

Women and educational testing: a selective review of the research literature and testing practices, by Tittle, McCarthy, and Steckler (547).

I-7 Beginning reading

Influence of instruction on early reading, by Barr (31).

Reading for meaning, Volume 1, *Learning to read*, by D'Arcy (119).

British research and beginning reading, by Goodacre (201).

Institute for child behavior and development. The acquisition of reading skills: a developmental stage processing model, by Mason (363).

The curious role of letter names in reading instruction, by Venezky (560).

I-8 Reading and learning disabilities

Perinatal events as precursors of reading disability, by Balow, Rubin, and Rosen (29).

Alexia, by Benson (43).

Attention and learning disordered children: a review of theory and remediation, by Harris (239).

Applied behavior analysis and learning disabilities, Part II: Specific research recommendations and suggestions for practitioners, by Lovitt (345).

Brain-behavior relationships in children with learning disabilities, by Rourke (477).

Teacher involvement and early identification of children with learning disabilities, by Schaer and Crump (488).

I-9 Response to reading

Issues of censorship and research on effects of and response to reading, by Beach (40).

Reading, natural learning, and the interpretation of literature, by Hillocks (256).

Identification of the structure of prose and its implications for the study of reading and memory, by Meyer (383).

I-10 Reading interests

The new students: what they read, by Davis (121).

The reading habits and interests of adolescents and adults, by Hayes (245).

Understanding the adolescent reader, by Mertz (382).

Research related to children's interests and to developmental values of reading, by Robinson and Weintraub (467).

I-11 ITPA

Research on psycholinguistic training: critique and guidelines, by Minskoff (392).

The ITPA and academic achievement, by Newcomer (411).

Australian use of the ITPA, by Wray and Teasdale (591).

I-12 Organizing for instruction

Reading practices in open education, by Rogers (471).

Class size and reading development, by Arnold (14).

Specification of models for organizational effectiveness, by Hannan, Freeman, and Meyer (231).

I-13 Word recognition

Do children need to blend words? by Groff (215).

Blending: basic process or beside the point? by Groff (214).

Research in brief: shapes as cues to word recognition, by Groff (217).

The mythology of reading: I—Sight words, by Groff (216).

I-14 College reading

Reading in the community college, by Farrell (167).

Relationship between research control and reported results of college reading improvement programs, by Fairbanks (165).

I-15 Teacher expectation

Teacher expectation: prime mover or inhibitor? by Braun, Neilsen, and Dykstra (58).

Do teachers bias children's learning? by Dusek (145).

I-16 Visual perception—visual processing

Do words conceal their component letters? a critique of Johnson (1975) on the visual perception of words, by Henderson (248).

Three interrelated problems in reading: a review, by Bradshaw (55).

Familiarity effects in visual information processing, by Krueger (314).

I-17 Preschool programs

Effects of early intervention programs, by Roettger (470).

Compensatory preschool—do its effects justify its existence? by Booth (52).

I-18 Improving research

Reading research that has influenced reading instruction: 1960-1974, by Burns (69).

A proposal for practical (but good) research on reading, by Calfee (72).

Practical applications of reading research, by Harris (237).

I-19 Comprehension

Meaning, memory structure, and mental processes, by Meyer and Schvaneveldt (385).

Contexts and images in reading, by Jacob (271).

I-20 Language and reading

The child's concepts of language, by Downing (138).

Assisting children's language development, by Fox (185).

Relations between acquisition of phonology and reading, by Menyuk (381).

A manifesto for visible language, by Wrolstad (592).

A response (criticisms of a review of psychological training efficacy), by Newcomer, Larsen and Hammill (412).

I-21 Readability—legibility

Some new developments on readability, by Harris (238).

Criticism, alternatives and tests: a conceptual framework for improving typography, by Macdonald-Ross and Waller (352).

I-22 Historical studies

The quipu as a visible language, by Ascher and Ascher (17).

What history says about teaching reading, by Schreiner and Tanner (490).

I-23 Cross-cultural studies

Reading comprehension in fifteen countries, by Thorndike (543).

Methods and results in the IEA studies of effects of school on learning, by Coleman (102).

Comparative reading: state of the art, by Downing (139).

Content bias in adult reading materials, by Molloy (393).

I-24 Miscellaneous

Cross-modal development and reading, by Bryant (65).

Teaching reading with newspapers: a review of selected studies and reports, by Deroche (126).

What research says to the reading teacher, by Hardy (235).

Tactile and visual reading, by Hampshire (229).

Recent studies of reading standards in the United Kingdom, by Goodacre (204).

Trends in perceptual development: implications for the reading process, by Gibson (196).

On comics—an annotated reading list, by Fenwick (169).

Informal reading inventories: the instructional level, by Ekwall (154).

How effective is CAI? A review of the research, by Edwards, Norton, Taylor, Weiss, and Dusseldorp (151).

Research on the personalized system of instruction, by Kulik, Kulik, and Smith (318).

Concerning differences between good and poor readers, by Edfeldt (149).

Important research in reading and writing, by Early (147).

Decomposition of orthographic word classes, by Dickerson (131).

Illustrations in books for children: review of research, by Concannon (103).

Designing reading rate research, by Carver (83).

Standards of reading: a critical review of some recent studies, by Burke and Lewis (67).

The science of bibliotherapy: a critical review of research findings, by Heitzmann and Heitzmann (247).

A guide to tests of factors that inhibit learning to read, by Mavrogenes, Hanson, and Winkley (366).

Language interference and teaching the Chicano to read, by Ziros (599).

Bias in textbooks: not yet corrected, by Simms (503).

Reading in the social studies: a preliminary analysis of recent research, by Lunstrum (349).

Attitudes and reading, by Alexander and Filler (5).

Reading achievement in the United States: then and now, by Tuinman, Rowls, and Farr (553).

Self-concept and reading achievement an annotated bibliography, by Lang (325).

Reading and laterality revisited, by Kershner (292).

Hierarchical organization of reading subskills: statistical approaches, by Stennett, Smythe, and Hardy (527).

What is the proper characterization of the alphabet? I. Desiderata, by Watt (575).

II. *Teacher preparation and practice*

In an effort to determine the extent to which recommendations of their earlier state-of-the-art survey on the preparation of reading teachers had been adopted or modified, Morrison and Austin (397) undertook a follow-up study of *The Torch Lighters* during spring, 1974.

A questionnaire was mailed to the 74 colleges and universities participating in the original field study, plus 146 other schools selected on a geographical basis. Of the 220 schools contacted, 161 (or 73.2 per cent) responded, representing 40 states and considered representative of preparation programs for teachers of reading. The 3-part questionnaire was concerned with 1) the extent of adoption of the original 22 recommendations; 2) significant changes that had taken place in recent years in preparation programs; and 3) suggested recommendations for the future. Part 1 of the follow-up asked respondents to indicate the degree of implementation of each of 22 recommendations for their institution, ranging from "in effect to a substantial extent" to "recommendation not applicable." Results indicated that 14 recommendations are in effect to a substantial extent in a majority of responding institutions. Two additional recommendations were reported to be at least modified or strengthened by a majority of respondents. Ninety-five per cent (as compared with 53 per cent from the original study) indicated that at least 3 semester hours credit were devoted to reading/language arts instruction. More than 3 semester hours credit was reported to be required by 33 per cent of the respondents. A majority reported to be engaged in more active forms of instruction, including simulation and practicums. A large majority described their undergraduates as acquainted with professional reading journals. Included in the 6 recommendations that have not been adopted either on a substantial or modified basis are a required basic reading course for secondary school teachers, a planned recruitment, training and certification program for cooperating teachers, and a prolonged apprenticeship for students with limited understanding of the total reading program. Changes had taken place in 131 (or 81.4 per cent) of the schools responding. Six prominent changes included 1) increase in number of required reading courses, 2) introduction of competency-based courses, 3) increased use of earlier or concurrent field-experience, 4) offering of a course in diagnosis-correction, 5) teaching of the methods course in public school settings, and 6) availability of an academic specialization in reading at the undergraduate level. Diverse responses were received to the query seeking future needs, but most frequently mentioned was the need for a required course for secondary education majors.

As a follow-up to an earlier study which revealed teachers' inadequate understanding and application of terms used in reading instruction, Mazurkiewicz (369) investigated the amount of information the college or university instructor knows and applies regarding phonic elements and generalizations. A random sample of identifiable professors teaching reading in American colleges and universities were selected from 2 publishers' mailing lists crossed with the membership list of the College Reading Association. Of the 298 persons (representing 12 per cent of the identified population) invited to respond to a lengthy questionnaire during October and November, 1974, 222 (or 74.5 per cent) completed the questionnaire within the specified time limit. The purpose of the study was intended to be hidden from the participants. It was hypothesized that the sample would show agreement as to 1) definitions of frequently-used reading terms; 2) number of consonants and vowel letters in the alphabet; 3) number of consonant and vowel sounds in the language; and 4) the identification of graphemes used to represent such elements as blends, digraphs, dipthongs, and long and short vowels. Mazurkiewicz concluded from analysis of results that college professors show little agreement on what reading terms should be taught and their definitions, or on generalizations to be used in phonic analysis. Moreover, he reported that only a small percentage of those responding had a satisfactory knowledge of what they expected students to know.

Britton (62) compared the perceived teaching competency of 62 student teachers following participation in either a traditional (N=42) or experimental (N=20) reading methods course. Both courses were taught at Oregon State University. The 5-hour experimental model included some field-based practicum experience working one-on-one in local elementary schools. The traditional course met 3 hours weekly, was campus-based, and included no practicum. Each group evaluated its reading methods experience with a questionnaire rating scale, devised to spread opinion on 9 areas of teaching competence from "not helpful" to "extremely helpful." Application of the *t*-test to student teacher ratings showed a significant difference ($p<.01$) in each of the 9 areas favoring the experimental group. In addition, cooperating teachers rated the effectiveness of the student teachers in terms of their ability to communicate reading skills to children and the extent to which the student teachers demonstrated competence in each of the 9 identified skill areas. The *t*-test yielded significant differences at the .01 level for the experimental group in 1) knowledge of evaluation techniques, 2) teaching word attack skills, 3) knowledge of grouping procedures, and 4) personal confidence in teaching reading. The experimental group showed a difference significant at the .05 level in 1) knowledge of individual difference, 2) planning the reading lesson, 3) teaching the reading lesson, and 4) teaching comprehension skills. There was no significant difference between groups of knowledge of reading materials.

Pavlik (432) attempted to assess the undergraduate preparation program in elementary reading at the University of Northern Colorado between fall, 1970, and summer, 1973. A 3-phase study was developed and implemented: 1) to secure data relative to the faculty's perception of most emphasized course concepts, 2) to survey 764 recent graduates to determine degree of retention of those concepts, where course concepts were emphasized, why concepts were not mastered, the degree of importance attached to course concepts, and recommendations for improving the teaching of reading in the elementary school, and 3) to survey the responding graduates' principals and supervisors (N=65) to determine the degree of importance they attached to course concepts, and their recommendations for improvement. Fifty-one core concepts were identified by 4 reading faculty members through a *Q*-sort technique. A packet containing an author-constructed multiple choice test for the most-emphasized concepts, the *Mastery Assessment of Basic Reading Concepts*, a checklist of concepts emphasized, and selected open-ended questions were sent to 346 graduates (or 45.3 per cent) who agreed to participate in the study. Findings indicated that 28 concepts were mastered by the majority of respondents while 21 concepts were not. More than 50 per cent of the graduates selected their reading methods courses as responsible for their mastery of 17 of the core concepts. "Having forgotten" was the most frequent response for not having mastered core concepts. Respondents agreed that the core concepts offered were important for the beginning teacher. The majority of graduates felt that increased opportunity to work with children would improve the program. Administrators and supervisors also tended to agree with the importance of the core concept. Among their recommendations for improving course content were increased attention to grouping for instruction and approaches to beginning reading.

In an attempt to determine the validity of the *Inventory of Teacher Knowledge of Reading*, Kingston, Brosier, and Hsu (295) administered the instrument to 332 preservice and experienced teachers to detect performance differences. An additional purpose was to compare responses made by experienced elementary teachers, secondary teachers, and reading specialists. One group (N=120), composed of juniors enrolled in an educational psychology course at the University of Georgia, had no formal instruction in the area of reading. A second group (N=93) of college juniors had 1 or more courses in the area of reading. The third group (N=119) was composed of teachers taking inservice courses at the university. Comparisons revealed that reading specialists attained a higher mean score than elementary teachers and that undergraduates with course work in reading achieved higher means than both the group which had not had reading and the secondary teachers. The Kuder-Richardson Formula 20 reliability coefficient for the total group was calculated to be .89. Coefficients for groups ranged from +.74 to +.93. A comparison of scores of each of the groups was performed employing an analysis of variance technique. The differences between the mean scores attained by the experienced teachers, the undergraduates who had studied reading, and those undergraduates who had not studied reading was found to be highly significant ($p<.001$). An ANOVA performed between the mean scores of specialists, elementary teachers, and secondary teacners proved significant at the .001 level. An item analysis was made to determine which of the 95 items were successfully passed by 90 per cent or more of each group or failed by 30 per cent or more. With few exceptions, the items bore up well. A factor analysis of the data was further conducted to explore the degree to which the instrument measured the 7 components of reading suggested by the test authors: 1) readiness, 2) word perception, 3) comprehension and critical reading, 4) differentiating reading instruction, 5) silent and oral reading, 6) evaluation, diagnosis, and correction, and 7) goals of instruction. The resultant factor structure failed to support the 7 identified components.

Tierney (545) assessed and compared instructional characteristics of a random selection of 15 second and third grade teachers in 30 preselected schools in St. George (Australia) with a random selection of 15 second and third grade teachers in 30 preselected schools in DeKalb County (Georgia). The teacher characteristics investigated were teacher knowledge of reading instruction and the frequency of the following behaviors: teacher direction, teacher initiation, teacher correction, cognitive questioning, broad questioning, narrow questioning, teacher acceptance, teacher praise, student responsiveness, oral reading, silent reading, directed activity, and non-functional behavior. Teacher characteristics were assessed with 2 researcher-constructed instruments, the *Test of Knowledge of Reading Instruction*, and the *Reading Instruction Observation Scale*, the former an 86-item multiple choice test of knowledge and the latter designed to analyze cognitive and affective aspects of teacher behavior during reading instruction. Data were collected during the 20th and 21st weeks of the school year through categorization of behavior observed at 5-second intervals during a 25 to 30-minute reading lesson through responses to the *Test of Knowledge of Reading Instruction* and through information sheets. Since the results of a multivariate *F* test were significant ($p < .001$) for the combined vectors of teacher variable scores, statistical hypotheses were tested relating to interactions of *grade level* and *country* and to main effects of *country* and of *grade level*. Only the main effect of *country* was significant ($p < .001$). The dependent variables which discriminated strongest, and thus contributed most to the main effect of *country*, were determined: Australian teachers displayed more teacher initiation, teacher correction, and teacher praise; and they used more oral reading. American teachers displayed more narrow questioning and teacher acceptance and had more student responsivness and silent reading.

Burgett and Dodge (66) compared the training, role responsibilities, and salaries of personnel designated as specialists in reading and in learning disabilities. A set of 39 task competencies or responsibilities was adapted and administered in questionnaire format to a random sampling of 20 Wisconsin school districts selected from 92 cities with populations over 5,000. Respondents from each district were selected by the district administrator and included such personnel as the remedial reading teacher, reading teacher, reading specialist, special learning disabilities teacher, and the supervisor of learning disabilities. The final sample included 18 individuals certified in reading and 23 in learning disabilities. Respondents indicated the degree (*always, sometimes, never*) to which they perform each responsibility. Chi square values did not indicate significant differences for 34 of the 39 functions. The remaining 5 functions were performed to a significantly greater degree by learning disabilities personnel than by reading personnel. In a comparison of salary, degrees, and experience, the researchers reported that learning disability and reading personnel differed significantly only at the bachelor's degree level, where the learning disabilities personnel perform their duties for lower salaries ($11,000 and under) and with less experience (1 to 5 years) than reading personnel.

The effect of school district variables on academic achievement is examined by Alexander and Griffin (6). They found the Bidwell and Kasarda model of school district effectiveness deficient in 2 main regards: 1) It was viewed to account for a relatively insignificant portion of student academic variances and 2) The specific parameters of casual interdependency estimated were thought suspect due to the omission of student academic ability from the analysis. Alexander and Griffin tested a model similar to Bidwell and Kasarda's. Three dimensions of academic achievement were measured by mean grade equivalent scores obtained on the Math, Reading Comprehension, and Vocabulary subtests of the *Iowa Test of Basic Skills* by third, fifth, seventh, and ninth graders in the

24 school districts in Maryland. Academic ability (IQ) was measured with the *Cognitive Abilities Test*. All data were obtained through the 1973-1974 Maryland Accountability Project. Organizational (pupil-staff ratio and per cent of staff with graduate degrees) and ecological (per cent non-whites, wealth per pupil, per cent disadvantaged, education level, and total enrollment) properties of school districts were observed. In most cases, parallel measures were made at the district and school levels. Ordinary least squares regression was employed to estimate the model's parameters. In the district analysis—for the 4 grades and the 3 tests—from 47 to 64 per cent of the between-school variance also lies between districts. As earlier research had shown between-schools variance to be only 10 to 20 per cent of the total student academic variance, approximately 5 to 10 per cent of the total variance lies between school districts in these data. For 3 of the 4 grades, the exclusion of IQ resulted in substantially biased estimates of the influence of most district "resources" and organizational variables on all achievement scores. The school-level analysis showed consistency with the results obtained at the district level.

Artley (16) reported results of an informal 3-part questionnaire administered to approximately 100 junior and senior education majors enrolled in a basic reading methods course at the University of Missouri, Columbia. Students were asked to recall effective and ineffective teaching of reading in their own educational experience. In response to a question dealing with teacher behaviors that promoted competence and interest in reading, some students indicated either that they could not recall or that their teachers had done nothing. The majority of repondents indicated commendable practices with the greatest number attesting to the value of being read to by teachers. Among other teacher practices resulting in favorable responses were provision of abundance of books with time allowed for free reading and use of a variety of activities, *i.e.*, dramatization, puppetry, games, art, music, and creative writing. External motivators, such as stars, stickers, and certificates, produced both positive and negative reactions. Students indicated other detractors from reading interest to be uninteresting teaching, too much skill drill, repetitious workbook pages, required book reports, round-robin reading, competitive activities, and static reading groups. Overwhelmingly, the major outside influence on reading competence and interest was reported to be parents or family.

Hecht (246) interpreted data from a 1970 USOE national survey of 22,000 teachers on 85,000 pupils in grades 2, 4, and 6 using the *Pupil-Centered Instrument* (PCI). For the purposes of her study, the 9 per cent of all pupils identified as potential dropouts (PD) and the 8 per cent of all pupils identified as academically gifted (AG) were compared against a series of other variables, producing cross tabulation tables for variables including background factors (sex, attendance, income level, receipt of welfare, race, and the dominant language in the home); persistent pupil problems (academic achievement, health related, and personal); and special services received. For each population, PD and AG, percentage responses of the total population on each variable over which it was crossed were recalculated to yield percentage responses based on 100 per cent of the PD and AG populations. For example, 20 per cent of the PD population came from families on welfare as compared with 3 per cent of the AG population. The total for receipt of welfare projected for the PCI study was 7 per cent for all pupils in the nation in grades 2, 4, and 6. The author concludes that PD and AG pupils are rated by their teachers on variables perceived as opposite ends of a continuum from "least desirable" to "most desirable" traits, *i.e.*, to come from a stable home of the majority culture, attend school regularly, have few problems, not require special services, and be progressing well in school. The PD is the reverse.

The purpose of an investigation by Foster, Schmidt, and Sabatino (182) was to determine whether or not the label *learning disabled* generates negative bias effects which could be potentially destructive to a child's classroom experience. Forty-four elementary grade teachers (F=32; M=12) employed in a mid-Pennsylvania urban school district were told they were participating in a reliability and validity study for a newly developed teacher-referral instrument. After random assignment to treatment groups designated as normal expectancy condition (control group) and low expectancy condition (experimental group), the segregated groups were exposed to a videotape of a normal fourth grade boy engaging in 4 different activities: 1) taking the *Wide Range Achievement Test* (WRAT); 2) taking the *Peabody Individual Achievement Test*; 3) involved with various perceptual/motor tasks; and 4) during a brief play period. The subject's performance was at grade level on recognition of words (WRAT) and on the General Information subtest. The control group was told that the child had been evaluated by a clinical team and was considered normal; the low expectancy group was told that this evaluation procedure resulted in classification of the child as *learning disabled*. Teachers were asked to rate the observed child using a teacher referral form developed by Model Learning Disabilities Systems of Pennsylvania. The device consists of 2 types of items relating to various academic and skill areas. The first set of items related to specific academic skills and necessitated that the rater select a grade equivalent score at which the child was perceived to be functioning. The second set required assigning a rating representing the degree to which various potential problems (encompassing language, perceptual, attention, and personality behaviors) were evidenced. The 2 types of items were analyzed as separate measures. *T*-tests for these data indicated significant differences ($p < .001$) between means for normal and low expectancy groups for both dependent measures. The subjects allowed the deviancy label of learning disabled to alter perceptions in a negative direction.

Royer and Schumer (479) examined the impact of having teachers make predictions about future student performance in reading achievement on the actual achievement of the student. Subjects were enrolled in a remedial reading program serving an elementary school system in Western Massachusetts and had been selected for the program on the basis of previous test scores and teacher recommendations. Data were gathered from pretesting and post testing with the *Stanford Reading Achievement Test* (alternate forms) for the program's 6-year history (N=650), with data from the first 3 years providing basis for comparison. Near the onset of the program's fourth, fifth, and sixth years, each remedial specialist was asked to make predictions as to the grade-equivalent scores for each Stanford subscale that each of her students would attain on the post test given at the end of the year. Predictions were based on results of the pretest, reading diagnostic tests, and consultation with previous teachers. Average achievement test gain in grade-equivalent scores for each of the program years were computed by summing each of the Standord subtest scores and then by dividing by the number of scores contributing to the sum. Data were complete for 298 subjects. Average gain for the 3-year period prior to the prediction treatment was .84 grade-equivalent-years as compared with 1.21 years after teachers started predictions. The analyses for participants in the program for 1 year indicated that the students enrolled in the program when the predictions were made outperformed those enrolled prior to the beginning of the prediction treatment. However, analyses for multiple-year participants did not support the hypothesis. In this group—after partialing out the effects for intelligence—there was no statistical evidence for superior performance for the prediction group.

Hales and Tokar (226) investigated the effects of the quality of essay-response papers that precede a particular essay response paper on the grade assigned to that particular response. The investigation attempted to determine whether the effect was in accordance with

Helson's Adaptation Level (AL) theory. For example, in AL theory, a grader who initially encounters a block of poor essay question responses "adapts" to these responses and tends to perceive subsequent responses as being better than they would have been perceived in another situation. Twenty-six responses contrived by the researchers were prepared for an essay question appropriate for fifth and sixth graders and dealing with causes of the American Revolution. A panel of 6 doctoral students in elementary education rated each response on a 5-point scale, ranging from "outstanding" to "unsatisfactory." An inter-rater reliability of .90 was obtained using analysis of variance. Two sets of responses were prepared according to mean ratings. Set 1 contained very good responses, followed by 2 papers of average quality (the experimental responses), followed by the remaining 19 responses. Set 2 contained the block of poor responses first, followed by the experimental and the remaining responses. A total of 128 preservice teachers enrolled in education methods courses were asked to score one set of papers, using the same 5-point scale (Set 1=65; Set 2=63). Subjects received copies of the question, the experimental sets, and descriptions of typical unit content on the Revolutionary War. A multivariate analysis of variance revealed that the groups varied significantly ($p<.05$) in their marking of the experimental (average) papers. The direction of the difference between means of each set was predicted by Helson's AL theory.

Schwartz (492) investigated the attitudes of 69 teachers, paraprofessionals, and others in education-related professions, categorized by occupation, race, and socioeconomic status (SES) on the use of black dialect materials for beginning reading instruction. Structured interviews were conducted individually and taped by 3 trained interviewers; 2 were black and 1 white. Each of the interviewees was asked to peruse reading materials written in black dialect before being questioned relative to their beliefs about correcting young children's speech, and "correcting" black dialect. In addition, each of the interviewees responded to the appropriateness of black dialect material in the classroom, toward children's learning to read with these materials, their effect on later reading (in regular materials), and the perceived benefits of black dialect material. Responses to questions were categorized as "positive," "negative," or "qualified," the latter reflecting a positive response based on some qualifying condition. Analyses of data were based on application of the chi-square test to the frequencies of responses obtained for categories of race, SES, and occupations. Significant differences ($p<.01$) were obtained across all categories for opinions dealing with correction of young children's speech. More black, paraprofessional, and low SES people believed in correcting children's speech. This trend was continued but was diluted somewhat when the question dealt specifically with correcting black dialect, with only occupation reflecting significant difference ($p < .01$). There were no significant differences between black and white respondents in their attitudes toward the overall usefulness of black dialect readers, both categories reacting positively. Yet significantly more middle SES and professional interviewers believed dialect readers would be useful than low SES and paraprofessionals.

Cunningham (115) attempted to measure teachers' concern with reading as a meaningful process by determining their attitudes toward miscues which did not affect meaning. Specifically, the investigation concerned itself with determining the percentage of non-meaning-changing miscues that teachers reported they would correct and the differences in the percentages of reported correction when non-dialect-specific and black-dialect-specific miscues are compared. Subjects were 75 students encrolled in a summer graduate reading course. During the first week of class, the students completed a 20-item *Miscue Attitude Questionnaire* (MAQ), which included 18 alleged miscues which left meaning intact (9 were non-dialect-specific miscues, and 9 were black-dialect-specific translations). Two items were included which changed the meaning. In addition, the students completed the *Black Dialect Recognition Questionnaire* (BDRQ) 1 week later, composed of 18 items which required marking the alleged miscues as most typical of black speech, white speech, or equally typical of both. Reliability estimates were obtained using the KR21 formula for the 18 initial MAQ items ($r=.584$; $p<.01$), the 9 black-dialect-specific items ($r=.766$; $p<.01$), and the 9 non-specific dialect items ($r=.652$; $p<.03$). No test for significance between the mean number of corrections of black-dialect translations (7.42) and non-dialect specific translations (2.24) was performed because of the magnitude of the difference. Of the 9 black dialect items on the BDRQ, the mean number correctly recognized was 6.2 (or 69 per cent). Of the non-dialect specific items, 2 per cent were incorrectly identified as spoken "mostly by blacks." There was no significant correlation between recognition of black dialect items and correction of black dialect translations as measured by the 2 questionnaires, *i.e.*, teachers who recognized many black-dialect-specific items were neither more or less inclined to correct these items than teachers who recognized few black-dialect-specific items.

A 1973-1974 survey of English department chairpersons of all Illinois high schools outside Chicago (N=664) was undertaken by

Koenke (304) to ascertain which reading tests were most frequently used. Additional information was supplied relative to the number, location, and structure of reading programs; how the chairpersons viewed the need for and role of reading specialists; and which tests were used for screening/diagnosis. Of the 315 schools which responded, 41.5 per cent had reading programs, a heavier concentration of which were in suburban schools. Sixty-nine per cent of the reading programs reached grades 9 through 12, with suburban schools reporting almost exclusive use of this structure. Respondents indicated general positive agreement to the desirability of a staff reading specialist (96 per cent). At least 38 different group reading tests were in use, with the *Nelson-Denny Reading Test* and the *Gates-MacGinitie* the most commonly reported (22 per cent each).

Calvert (74) reported results of a survey of 600 principals conducted by the North Carolina Council of the International Reading Association, designed to reflect principals' perceptions of reading programs in their schools. Information sought included: 1) persons/roles responsible for evaluating reading instruction, 2) support for reading instruction provided by principals, 3) perception of their school's effectiveness in teaching reading, 4) principal's training in reading and perceived value of training, and 5) principal's perceived competence in evaluating reading instruction. Approximately 2-thirds of the 400 respondents stated that school-wide objectives for reading had been jointly established by the principals and teachers; parents, but few students, had been involved. Evaluation is done generally by principals and teachers. Principals felt that they provided support to the reading program by giving priority to budget and freeing teachers to attend conferences. Five most frequently mentioned needs for improving reading instruction included 1) better selection and use of materials, 2) additional trained staff, 3) more inservice training, 4) more reading instruction above the primary grades and in the content areas, and 5) more teacher aides and volunteers. Over 50 per cent of the respondents felt competent to evaluate teachers as they were teaching reading. In addition, over half of them felt their schools demonstrated a high degree of effectiveness in teaching a variety of students to read.

Bader (24) reported the results of a 1975 survey designed to determine the extent to which states required preparation in reading instruction for secondary teachers. A 100 per cent response was received from questionnaires sent to offices of the superintendent of the 50 states and the District of Columbia. Results indicated that 18 of the 51 certifying boards (35 per cent) require secondary reading preparation for either permanent or temporary certification. An additional 30 per cent report that they have the requirement under consideration. Data from the respondents are summarized by state.

Ramig and Dulin (452) described the format and evaluation of a training program for 15 Wisconsin teachers of Adult Basic Education (ABE), focused upon upgrading teachers' abilities to recognize and deal with reading problems at the ABE level. The college-credit course was offered through the University of Wisconsin—Madison during the 1974 academic year. The course was designed with emphasis on application, with necessary theoretical considerations reinforced by practical exercise. The 3-part evaluation consisted of 1) "rating" of the instructor and the course, 2) ranking of the course components by their perceived utility, and 3) weightings of the relative value of 5 general areas of course concern. The pedagogical topics were more often ranked as most useful (*i.e.*, topics dealing with methods, materials, diagnosis, and evaluation). Kendall's Coefficient of Concordance indicated a statistically significant ($p<.001$) intra-group agreement. When the participants were asked to allocate 100 points among the 5 course concerns, the mean ratings were 1) application exercises, 26.25; 2) skills work, 22.9; 3) professional awareness, 21.25; 4) materials, 17.1; and 5) theory, 12.5. Intra-group agreement was again statistically significant ($p<.02$).

Following a felt need for more systematic inservice training in the teaching of reading, 4 centers were established in Manchester to effect linkage between the work of the classroom and remedial teachers. Platt (440) describes the inservice courses as concerned with a wide remedial educational curriculum and aimed toward primary school teachers. Twelve teachers from 12 schools met at the centers 4 mornings per week for 4 weeks. Replacement teachers were provided at each school and, in some cases, replacements remained until the entire staff had received training. Because the heads of the centers also had supervisory responsibility for the remedial reading teachers in each district, they could achieve follow-up support for the primary teachers in the afternoon. Judgment of the program's success was based on continuation for 4 years of what had been originally conceived as a 1-year experiment. Platt describes an experimental study in process to measure program effects for 18 randomly chosen teachers who had attended courses as compared with a control group of 18 teachers who taught in similar schools but who did not receive training. Data were collected related to prereading and post reading test results, teacher and children's attitudes, teacher rating of students, and classroom teaching practices. Analysis of the data is not yet complete.

Boehnlein and Gans (49) compared performance of Cleveland State University education students enrolled in on-campus reading methods courses with those in a field-based program on a test of ability to assess and to teach specific reading skills. The control group was composed of students enrolled in 3 on-campus sections of reading methods (Groups A, B, and C) during the summer and fall, 1972. One of the control sections (Group A) was composed of experienced teachers, isolated *post hoc* in order to assess the effect of previous experiences. Participants in the experimental group (Groups D and E) were selected on the basis of personal interviews from a pool of applicants by university and public school personnel and were enrolled in field-based programs during the 1972-1973 and 1973-1974 school years. All sections were taught by the same instructor and all used the same basic text. Methodology was comparable, differing in the amount of time spent working directly with children. The *Harp and Wallen Competency in Teaching Reading Test* (Forms A and B) was administered as the pretest and post criterion measure. Pretest scores were examined by 1-way analysis of variance and revealed no significant differences between group means. Significant differences were indicated by the criterion scores on the post test. Planned comparisons revealed no significant difference in means among the on-campus groups (A, B and C), whether experienced or not. A significant difference at the .05 level between the average mean scores favored the field-based over the on-campus groups.

Rayborn and Thompson (457) investigated the effect of an introductory reading methods course on the reading achievement of 183 junior-level education majors at the University of Southern Mississippi. Subjects were enrolled in 1 of 8 reading methods courses during the 1974 academic year. The *Nelson-Denny Reading Test* (Forms A and B) were administered as the premeasure and post measure. Four of the 8 classes (Group 1) were assigned Form A as a pretest; 4 (Group 2) were assigned Form B. Post testing in each case was with the alternate form. Analysis of variance (a 2 x 2 design for repeated measures) was used to assess the effect of test form order on pre/post achievement. While both groups achieved significantly greater results on the vocabulary subtest post test ($p < .05$), Group 1 evidenced significantly greater gain than did Group 2. Although differences in pre/post comprehension scores were not significant for either group, there again was a significant ($p < .05$) interaction, indicating an increase in mean comprehension scores for Group 1, but a slight decrease for Group 2. Total test scores obtained on the post test were significantly greater ($p < .05$) than total pretest scores. The authors credit incidental course learning and exposure for improved vocabulary and total test scores, and explain the variance in test scores by the relative difficulty of the forms.

Strickler (531) investigated the effects of training in "Teaching Reading as Decoding" (Minicourse 18 designed by the Far West Laboratory for Educational Research and Development) on the teaching behavior of 2 panels of inservice (N=14) and preservice teachers (N=19). The effects of training were also investigated in relation to pupil performance on reading decoding skills. The treatment (training with Minicourse 18) was assigned to 7 inservice and 9 preservice teachers. The remaining 17 teachers served as the control group, receiving training in classroom management techniques. All 33 subjects taught a 20-30 minute decoding lesson to 3 pupils 1 week before and 2 weeks after the treatment, with both lesson content and sequence specified in advance. Precourse and post course lessons were videotaped and subsequently analyzed by 8 trained raters to determine the frequency of teachers' use of 27 specific behaviors related to teaching reading decoding skills. Performance on decoding tasks of 115 first, second, and third graders in the classes of inservice teachers receiving Minicourse 18 was compared, by analysis of covariance, with performance of an equal number of pupils in the classes of control group inservice teachers. Parallel forms of the Paragraph Meaning and Word Study Skills subtests of the *Stanford Achievement Test*, Primary Battery I or II, were administered to second and third graders 2 weeks before and 4 weeks after the training. In addition, all pupils were pretested and post tested with equivalent forms of a 46-item decoding test developed by the Far West Laboratory (*Minicourse 18 Achievement Test*). The test interval was 14 weeks. Comparison of precourse and post course teaching behavior for the 16 trainees indicated change in the expected direction for 24 of the 27 rated behaviors. Application of the *t*-test for correlated means revealed statistically significant mean change ($p < .05$) for 16 of the behaviors. Point-biserial correlations between the treatment condition (training vs. no-training) and covariance-adjusted post course teaching behavior indicated that the teachers' frequency of use of 25 of 27 behaviors in their post course lesson was associated with the treatment. Multivariate analysis of multiple covariance of grade equivalent scores, with the pretest performance on both Stanford subtests as the covariates and adjusted post test performance as the criterion, indicated statistically significant ($p < .05$) between-group differences in pupil performance favoring the experimental teachers' group. Statistically significant differences ($p < .0001$) were discovered using univariate analysis of covariance between treatment and non-treatment pupils on the *Minicourse 18*

Achievement Test, favoring the treatment group. Distribution of pretest and post test grade equivalent scores on the Stanford Word Study Skills subtest indicated that the training appeared to benefit less able pupils most in that the distribution of post test scores exhibited less positive skewness and was more platykurtic.

III. *Sociology of reading*

As in past years, most of the research in this section has been completed by researchers in fields other than reading, especially by those interested in journalism and communication.

III-1 Use of mass media

Conway, Stevens, and Smith (104) tested the hypothesis that children's orientations to the political system varied with the type and amount of their media consumption. Dependent variables were the children's identification with a political party, their choice of the candidate they would support if they could vote and that candidate's political affiliation, their perception of the importance of adults belonging to a political party, and their responses concerning which political party is most helpful to certain groups in society. Each child's reported level of daily televiewing and frequency of watching newscasts were ascertained. Partisan identification, voting choices, and perceptions of party policy activity varied significantly with levels of consumption of television news and of current events in newspapers but not with total television viewing. The importance of children's perceptions of adults belonging to either party was weakly related to all 3 measures of media consumption. Knowledge of the roles of certain governmental offices was not associated with the frequency of television viewing but was moderately related to watching television news and reading about public affairs in newspapers and magazines.

A study by Murdock and Phelps (400) concerning the use of mass media in the secondary schools in England was divided into 2 parts: a study of teachers and a study of pupils. The results of the survey concerned with leisure-time activities of teachers revealed that many had only a limited knowledge of the popular newspapers, television, and pop music with which their students were most familiar. Since teachers tend to prefer mass media generally classified as "highbrow," the media experiences tend to enlarge rather than decrease the gap between the pupils and teachers. The 4 most frequently mentioned effects of mass media on pupils' behavior as judged by all teachers were the following:

preoccupation with pop music and fashion, identification with pop stars and other media personalities and imitation of their mannerisms, frequent use of catch phrases, and anti-school values encouraged by the media. Seventy per cent of the English teachers thought that the mass media had great influence on pupils' work, but only 43 per cent of the science teachers held the same opinion. Murdock and Phelps interpreted the latter finding to mean that science teachers tend to see mass media material in terms of factual material, whereas English teachers stress its effect on pupils' imaginative expression. The most important factor affecting teachers' use of audio-visual aids is the extent to which they are available. Tape recorders and filmstrip projectors are the most readily available equipment in the schools. When the equipment is available, science teachers tend to use films and filmstrips far more than teachers as a whole; English teachers tend to make more use of tape recorders, television, and radio. Almost half of the teachers introduced material in their classes from newspapers and television, but only small numbers introduced pop records or comics. The most frequently stated aims of the use of mass media material in the classroom were to relate the classroom to the outside world, to provide relevant and topical illustrations, and to engage pupils' interests. From the pupils' survey, the following findings related to reading or the use of mass media were noted: academically successful pupils from middleclass homes have a relatively high commitment to school; even among these pupils there is a minority who are alienated to some extent from their schools. Adolescents from all social classes in all types of schools are, in varying degrees, interested in the pop world. Those students more highly committed to school appeared to do more reading than those less committed to school. Adolescents actively choose and evaluate the kinds of programs, magazines, and records they see, read, or hear. Their choices appear to be related to their school experiences, their social class and background, and their neighborhood milieu.

Fine (175) was concerned with the recall of information about the diffusion of a major news event, the resignation of Vice President Agnew. Although the importance of interpersonal communication was the focus of the research, the influence of the mass media was also considered. The news of the resignation spread rapidly within the university community; over 70 per cent heard the news first through interpersonal communication. Only 4.4 per cent of the students queried heard the news first through a newspaper.

Trends in attitudes toward and uses of mass media for 1974 were reported by Roper (472), who compared the results with those of others in a series of studies since 1959. Questions concerning all media were asked first in interviews and were followed by specific focusing upon television. The findings of the last study related to reading include the following: when asked the source from which they usually got the news, 56 per cent of the college educated received it from television and 55 per cent from newspapers. (Multiple answers were accepted.) Television remains the most believable source of news and is the one medium people would keep if they could have just one. The median number of viewing hours was 3:02 per day; the median for the college educated subjects was 2:23, and for those in the upper economic levels, 2:47. Persons were asked to give their sources of information on candidates running for office at the different levels of government. Both newspapers and television are important sources in the state and national elections, especially television. However, newspapers appear to be the most important medium at the local level.

Sachsman (484) examined the coverage of environmental news in the San Francisco area to determine how the media receive their news and decide what news to carry. From the 42 daily media, a sample of 11 reporters and editors during an 8-week period sorted the news releases concerning the environment as to whether or not the releases were used and what the sources of the releases were. The second part of the study was a content analysis of the environmental coverage by the daily newspapers, radio stations, and television stations for a period of 12 days in June, 1971. The third part of the study was comprised of interviews to determine the sources of information and the media gatekeeping processes for certain stories. The larger media tended to receive more public relations environmental material than did the smaller media, and newspapers more than broadcast stations. In addition, environmental beat reporters received more than did the regular reporters. Nearly all of the media depended upon wire services, but the wire services often received their news from newspapers which were, in turn, influenced by public relations efforts. During the study, the 11 journalists saved 268 environmental releases and used 192 environmental ones. Basic standards of news worthiness seemed to determine which ones were used. From the content analysis, it was found that the 25 daily media carried 1,002 environmental stories in the 12-day period, with the press services and networks being important suppliers. More than 100 stories were devoted to each of the following issues: conservation, land use, water quality, and air quality. The most frequently identified source of the news was the government. Of 887 environmental items, 474 were not wire service or network-supplied stories; of these, the sources of 200 were identified. More than one-half of the 200 were influenced by public relations efforts.

Atwood and Sanders (20) studied the influence of the media upon split ticket voting as a part of a larger study. Data were obtained through personal interviews with 419 subjects, who gave their perceptions of the amount of information obtained from various sources, the believability of information from each source, the kinds of information the subject felt he was receiving, the influence of each source, and usefulness of each source for seeking information about political questions. Seven dimensions were isolated through factor analysis. Multiple discriminant analysis was used to determine if the factors were related to self reports of party affiliation and ticket splitting. Thirty-two per cent voted a straight ballot. Twice as many voters believed television more than they believed newspapers; nearly 3 times as many said they received their campaign information from television as compared with newspapers. In spite of these results, there was no support found for the argument that television was the crucial medium in inducing split ticket voting. Voters appear to receive considerable information about politics from other sources, especially the print media.

Newspaper reading and television viewing habits were explored by McClure and Patterson (371) through a series of interviews to determine the effects of the media during the 1972 general election. Prior to the election, 626—or 86 per cent—of the original panel of subjects were interviewed 3 times. Based on logs which they kept of their television viewing habits and on reports of the frequency with which they read various sections of local newspapers, the subjects were classified as heavy or light network news viewers and/or newspaper readers. In each interview they were also asked to rate on a 7-point scale the importance of issues which had been emphasized in the media. Heavy television viewers were no more likely to increase the salience they attached to 2 of the 3 issues than light viewers did. The opposite was true for heavy newspaper readers since the importance attached to 2 of the 3 issues was significantly related to the level of newspaper exposure. In every analysis made of the 1972 data, exposure to network news had the least effect upon the subjects

The impact on public affairs knowledge of mass media and interpersonal communication behaviors of older persons was explored by Kent and Rush (291). Data were derived from interviews with members of 3 groups considered to represent a cross section of older people in Gainesville, Florida: the Foster Grandparents Program, the Retired Senior Volunteer Program, and the Alachua County Retired

Teachers Association. Education, income, ethnic background, sex, age, and employment status were the independent variables. The subjects were asked questions concerning the extent of their use of mass media, including reading and their interpersonal communication behavior. One question concerning amnesty for Vietnam War resisters, which was the dependent variable, was asked each subject to test his knowledge of public affairs. The findings included the following: Although the subjects reported using a wide range of communication types, the exposure to print media was the only one related to the knowledge of amnesty. Older people living alone tend to read more books than those living with someone; the latter tend to give more attention to reading news magazines. Exposure to magazines, books, and newspapers was related to the level of education; in turn, the level of education was the only independent variable related to knowledge of the situation. On the other hand, television, radio, movies, and telephone use had little relationship to either level of education or public affairs knowledge.

Hiebert, Ungurait, and Bohn (253) traced the development of a number of aspects of mass media. They depicted the process of mass communication through models. They reviewed 4 theories of the press (authoritarian, Soviet-Communist, libertarian, and social-responsibility theories); but they showed that there were many deviant national media systems which could not be classified under any one of the press theories. The development of media systems is dependent upon physical geographical characteristics, technological competencies, cultural traits, economic conditions, political philosophies, and media qualities. The effects of mass media on society as shown through research were classified generally as the effects on cognition and comprehension, on attitude and value change, and on behavioral change. They were classified specifically as problems of intense public concern: the effects of mass media on children and the effects of violence and pornography on society. Included in the report was pertinent information about other aspects of mass media: governmental regulations, audiences or readers and their effects upon media content, the forms and uses of feedback, and the historical perspectives of books, newspapers, magazines, motion pictures, radio, television, sound recording, the newsletter, underground press, graphic materials, mixed-media presentations, and data banks. Also considered were the uses of mass media: information, interpretation; education; persuasion and public relations; sales and advertising; and entertainment.

The development of Nazi war propaganda as traced by Baird (26) was based on captured German archival materials and on interviews with members of Goebbel's propaganda corps. The interplay between Nazi ideology as exhibited in propaganda and the changing tide of Nazi fortune in World War II is depicted. Throughout the book Baird advances the theory that Nazi ideology and propaganda were based on a mystical, irrational body of doctrine—primarily the myth of Nazi and Aryan superiority in racial and national struggles. The propaganda disseminated by Goebbel and his corps was related to the Nazi invasion of the different countries. They placed their propaganda in many kinds of sources: news articles, editorials, Goebbel's lead article in a newspaper, news releases, leaflets, documentary films, oratory, whisper or person-to-person communication, radio, church groups, clubs, astrology, and communiques. All propaganda was prepared to enhance the prestige of the Nazis, especially the military, and to downgrade the enemy. Included also were descriptions of counter propaganda techniques of the enemy, especially of the British, and censorship within Nazi Germany and occupied countries. Baird pointed out that the more Hitler and his followers used irrational methods, the more they ignored the world of reality. He also demonstrated that Goebbel's chief disire was to administer the propaganda machine, not the vast bureaucracy. The Battle of Stalingrad marked the shift from the combination of factual-mythical propaganda to an increasing dependence on irrational themes at the expense of factual war reporting. The book is well documented.

An investigation by Pietila (439) was concerned with Laplanders' conceptions of the mass media—especially after television was first introduced. Specifically, the purposes of the study were to determine the importance of television to the people, the influence of television upon the people's conceptions of the other mass media, the advance ideas the people had concerning the importance of television, the manner in which the advance ideas corresponded to actual experience, the factors underlying the significance of television in transmitting the following: news, general information, art, and entertainment. The data in this study were compared with the results of a 1965 investigation when television had not yet reached people in Lapland. The medium most preferred by non-owners of television remained fairly stable; radio first and then newspapers. When people acquired a television set, the importance of radio suffered the most. The most important medium for television owners was the newspaper. Those not owning television sets considered the radio to be the most important in 3 functional areas: news, art, and entertainment. Books were considered to be more important than either newspapers or radio. The introduction of television changed the conceptions of the media functions. Radio lost its function as a general, all-purpose medium; whereas, the importance of the newspaper in transmitting news increased. The significance of books decreased less than any other medium except the newspaper. Television replaced the magazine mostly in art and entertainment functions. Earlier the non-owners of television had been asked to estimate the importance of each medium when they became owners of television. They correctly predicted that television would be less important than the newspaper but more important than other media.

Chaffee and Izcaray (87) applied several research models developed in recent years to a field setting in Barquisimato, Venezuela, where mass media are advanced but where society remains stratefied in education, income, and other socioeconomic factors. The inhabitants have access to 2 local daily newspapers, 11 papers from Caracas, 3 televisions channels located in Caracas, and at least a dozen local radio stations. The investigators devised a questionnaire of 32 items to measure various motivations for either using or avoiding news about government and politics in the newspapers and on television. The results were first analyzed by a matrix of intercorrelations and then subjected to factor analysis. A person's education was the strongest single predictor of his political and local knowledge. Newspaper exposure measures were significant predictors of political and local knowledge when all other independent variables were controlled. The experimenters concluded that the use and avoidance indices were not so powerful as simple media exposure items in accounting for variation in knowledge of public affairs. The subjects were asked to rate topics of national and local concern as "the most important" or "the next most important." Although there were some similarities between the public's agenda of topics and the extent of media coverage, there were also some major discrepancies. The media exposure and use and avoidance measures did not explain the variation in the topic priorities. The researchers concluded that the models of mass communication upon which they had based their research had limited applicability in a media-rich but still developing society.

Third world nations have advanced the idea that if the government guides their mass media to promote national harmony, unity, and consciousness, then many goals of national development can be met. Lent (334) investigated the recent development, structure, and functions of the mass media in Malaysia. With its formation, many larger newspapers in the 1960's—desirous of stronger national unity—acquired a Malaysian outlook in editorial policy and content. After race riots in

1969, the government reacted by establishing policies to force the mass media to assist in implementing government goals. In spite of the media being virtually a government tool, Malaysia is served by one of the best organized and most sophisticated mass media systems in southeast Asia. It includes 51 newspapers (representing 5 different languages), 3 or 4 magazine chains, 6 radio networks, 2 television channels, and an educational television system. The Chinese language press has the highest circulation, followed by the English language, Babasa Malyasia, and Tamil. The newspapers avoid investigative reporting, fill their pages with government speeches and campaigns, and ignore the opposition. However, the Chinese language dailies appear to defend and maintain their interests in pluralistic Malaysia.

III-2 Content analysis

Children's books on Asian American themes that are currently in print or in use in schools or libraries were analyzed and evaluated by the Council on Interracial Books for Children (108) to determine which could be used effectively in educational programs. In addition, the reviewers also indicated books that were inaccurate or demeaning in their portrayal of Asian American children. The major conclusion from the analysis was that, with 1 or 2 exceptions, the books were racist, sexist, and elitist and presented a grossly misleading image of the Asian Americans, who were described as being foreigners who looked alike, lived together in quaint communities, and retained alien customs. The books misrepresented Asian cultures, promoted the idea of Asian Americans being a model minority, which measured success by the extent to which they adopted white middleclass attitudes and values, and which advocated a low profile to overcome adversity and to lead to success. The books failed to depict Asian American culture as distinct from Asian culture or they presented an Oriental stereotype of it. Included in the report are the reviews of each of the 66 books, criteria for analyzing books concerned with Asian Americans, a consideration of loaded words and images to avoid, and guidelines for artists.

In their content analysis of folktales, d'Heurle, Feimer, and Kraetzer (129) investigated 6 dimensions: character distribution, sex-age distribution, affect content, outcome, aggressive behavior, and attitude content. Two raters scored the stories, and ratings were tabulated. In all 4 main classifications of the folk stories (Africa, Grimm, Japan, Norway), the stories are largely adult ones; only 1 of the 200 analyzed is exclusively about children. In all stories except those from Africa the characters meet with more success than failure. When aggressive behavior appears, it tends to be severe and physical; in all except the Grimm tales, such behavior is more often attributed to males than to females. The most frequently expressed themes and attitudes are concerned with traditionalism, preternatural conditions, presence of food or drink, helping or nurturing attitudes or behavior, rivalry, and cleverness. Militarism, peace, nationalism, and education in schools were attitudes which were totally missing. The tales include much conflict, both individual and group; but they do not include organized warfare or pacifism. The investigators pointed out ways in which the folk tales of the countries studied were similar and were different.

In another study, Gentry (195) estimated the extent of aggressive content in 6 fairy tales from each of 3 cultures: American, Japanese, and middle-eastern Indian. The analysis included the frequency of aggressive acts, the frequency of verbal versus physical acts of aggression, and the frequency of human versus non-human aggression. A qualitative study was made of the apparent motives underlying the aggression. The results showed that aggression, especially the physical type, was widespread throughout the tales of the 3 cultures. However, there was significantly more aggressive content including human aggression in the Grimm's tales than in those in the other 2 cultures. The majority of the aggressive acts appeared to be motivated by emotions such as anger, greed, and jealousy.

Yawkey and Yawkey (594) examined sexist, racist, and socioeconomic stereotyping and story location in young children's picture books prior to and after 1965. Twenty-six books published before 1965 and 25 published after that date were analyzed. Significant differences between the old and new picture books were found for the variables of race, socioeconomic status, and story location; but none was found for the sex variable. The new picture books included a greater number of people from different racial groups, and they portrayed main characters from minority groups more often than the older books did. The main characters in the older books tended to represent the middle or upper-middle socioeconomic populations; the main characters from the newer books included a combination of socioeconomic levels. More characters from lower socioeconomic groups appeared in the newer books than in the older ones. The settings for 90 per cent of the older books were rural; the new books portrayed a greater variety of settings, including urban, suburban, and country locations. The main characters playing dominant roles in both the old and the new picture books were largely males.

A content analysis was performed to compare the activities, roles, and relative importance assigned to males and females in selected picture books by Vukelich, McCarty, and Nanis (566). The picture books were those which were listed by 21 teachers as their favorites for use with young children. In the 22 picture books used, the males were the main characters 3 times as often as were females, but the number of female children depicted outnumbered the number of male children. One book *(Madeline)*, however, resulted in a total of 326 of the 484 illustrations of girls. Male children were more often shown as being active, using initiative, displaying independence, receiving recognition, and giving or receiving help. Male children, however, were also pictured as being engaged in quiet play, as being helpless, and as solving problems as often as female children. Differential treatment of men and women was found in terms of their occupations.

A comparison of the treatment of the 2 sexes in books published recently with those published prior to 1971 was made by Marten and Matlin (360) through content analysis. They examined the proportion of women in illustrations who were main characters and played active roles in 16 text books representing 5 publishers. The books were divided between grades 1 and 6 and between newer and older publication dates. The researchers found that females are now being represented slightly more in illustrations and as the main character in stories than they were prior to 1971, but they do not yet represent 50 per cent of the characters. In the older books, 67 per cent of all the activities females engaged in were classified as active; but in the newer books, the corresponding percentage was 55 per cent. For males, the proportion who are active increased significantly in recent books.

In an evaluation study, Stoodt and Ignizio (530) examined 70 children's books published since 1930 using criteria such as authenticity of customs, realistic illustrations, individualistic or stereotyped portrayals of native Americans, and story credibility. It was concluded from the examination that not 1 book is without flaws in representation of the American Indian. The areas described as likely to have the most flaws are authenticity of Indian life, characterization of Indians in literature, and vocabulary used to describe Indians. None of the books in the study were written by an American Indian.

Thirty picture books were examined by Rich and Bernstein (460) to explore the portrayal of feelings and experiences of children when they go to school for the first time. In the examination, 3 types of stories were found and discussed. One category of stories depicted happy initial school experiences where the characters expressed pleasant feelings in simple language and manner. The second category included stories that showed children as either eager or shy as the most prevalent reaction to the new school experience. And the third category consisted of stories that portrayed the first school experience as a crisis situation where the children discover a happy ending.

Through content analysis, Kingsbury (294) studied 91 examples of realistic fiction published in books for children in the 1930's, the 1950's, and the 1970's to ascertain their portrayal of work models and work-related values. A total of 194 different occupations were mentioned in the books studied from a total of 118 in books published in the thirties, 86 in books from the fifties, and 107 in books from the seventies. The settings for the stories varied by time period. Twenty-six of those from the thirties had a rural, mountain, or ocean setting. But only 6 of the books from the seventies had a distinctly rural location. It was found that 1970 authors appeared to differ from 1930 authors on the work ethic:In several instances comtemporary authors seemingly encourage their readers to question the importance of the traditional work-success values of their parents.

The purpose of the content analysis conducted by Stewig and Knipfel (528) was to learn if any changes had occurred in the role women play in children's picture books since a 1972 study by these same researchers. In general, women are portrayed in such books in 1 of 2 ways: as housewives and mothers or as professionals engaged in a limited range of occupations, most of which are considered "appropriate" for women. Although the more recent books showed an improvement in the portrayal of women over the earlier study, Stewig and Knipfel concluded that much remains to be done to achieve accurate portrayal of roles.

Lobban (344) analyzed 50 reader texts used in Great Britain to determine the nature of the roles of the sexes. Books were selected at random from the *Dragon Pirate Stories*, *Pirates First Series*, and the *Language in Action Teachers' Pilot Pack*. The total number of characters (animal, human, adult, child, fantasy figure) of each sex presented in the textbook and/or the pictures were coded for the 50 readers. Principal characters, activities of the characters, and adult occupations were tabulated. The findings included the following: more male than female central characters, males in more active roles than females, 33 adult male occupations but only 8 female ones. Lobban concluded that virtually none of the readers presented non-sex typed models or activities or goals to suggest non-stereotyped behaviors of children.

Twenty reading series for grades 1 through 6 were content analyzed by Britton (63) to gain information about the extent that racial/ethnic minority males and females are depicted as main characters and the extent of racial/ethnic minority sex stereotyping. The study compared the number of career roles for ethnic minorities and Anglos. The results of the analysis showed that minorities were represented in 14 per cent of the stories as major characters or involved in a significant way; Anglos were major characters in 86 per cent of the stories. More career roles were described for Anglo males than for any other group. Examples of minority stereotyping were also described.

Pictures and job descriptions found in 2 popular series of career orientation textbooks were content analyzed by Heshusius-Gilsdorf and Gilsdorf (251) to determine the extent of sexism which existed in these textbooks. They examined the numbers of presentations of working people by sex and of jobs by sex (those exclusively for females or for males or both). They also analyzed both series for statements expressing a double standard. Males accounted for 61 per cent of the working people in one series and 75 per cent in the other. Females accounted for 39 and 25 per cent. Percentages of jobs depicted for males only were 63 and 52; for females only, the corresponding percentages were 32 and 7. Females account for 17 and 8 per cent of persons in top management, professional, and technical positions compared to 83 and 92 per cent of the males. The portrayal of specific jobs reinforces the typical traditional sex-role stereotype. When both sexes are shown holding the same job, a man is usually shown as the director. The investigators did not find examples expressing double standards in one series, but they did in the second, which depicted females as sex objects, beauty as the only or a major job requirement, expected low intelligence for females, and restriction of females by marriage.

Hutton (266) examined 6 home economics textbooks to determine if there was evidence of sex bias in their illustrations. Books designed for food or clothing courses were omitted. She analyzed 1,116 illustrations, which she classified into 8 categories. Of the total illustrations, 65 per cent showed females; 17.3 per cent males; and 17.7 per cent both females and males. When a child of either sex sought advice, the child usually received it from the father. In subtle ways, teenage girls were shown as victims of bias. The 6 textbooks were oriented toward humanism and encouraged kindness.

Sex education books that have high circulation were surveyed by Brewer (60). She found that sexist stereotypes were prevalent and that racism is implicit because of the absence of characters other than white ones in the illustrations. Lifestyles portrayed are those of traditional middleclass, white, heterosexual Americans. Brewer concluded that disservice is done to girls at every socioeconomic level since the books convey the impression that the essential value of females resides in their ability to become mothers.

Two textbooks concerned with the history of Mississippi were content analyzed by Moore (395) to determine the focus of each book in regard to the treatment of the cultures and histories of native Americans, African Americans, other racial and ethnic groups, and women in Mississippi. Only one of the textbooks was on the state-adopted list for the required course in Mississippi history. The formats, illustrations, and word usage were examined for each book. The books were analyzed to determine the handling of specific historical periods: slavery, reconstruction, post reconstruction, and civil rights era (1950's and 1960's). The interrelationships of race, migration, and industrialization and their relationship to Mississippi history were also considered. Moore concluded that the textbook on the state list was inferior and was an example of "mythologized history" and did not meet the major criteria of the textbook review committee. On the other hand, the textbook not included was superior in format and content and was a progressive book.

Two Mississippi history textbooks, one which received state approval and one which did not, were analyzed by the Council on Interracial Books for Children (110). A suit attempting to force adoption of the latter book charged that the textbook committees selected textbooks that minimized the roles of minorities. The Council analyzed both books and found that *Mississippi: Conflict and Change*, which was the one not adopted, was superior to *Your Mississippi*, which had been selected. Although there were flaws in the former, the Council found it to be superior in format (informative illustrations, graphs, maps, marginal notations, bibliographies, for example), analysis of social problems, treatment of women, and the coverage of the civil rights struggle during the 1950's and the 1960's.

Danesi (117) surveyed 7 recent textbooks intended for use in elementary and intermediate Italian classes. Only 2 texts provide introductory descriptions on the methodology to be used in the course. All 4 intermediate texts use literary material. Elementary textbooks use dialogues which progressively grow longer but do not provide the verbal strategies students need. The audio-lingual textbooks focus on the oral skills prior to reading and writing, but do not account for the fact that it is usually impossible to treat language skills separately. Pronunciation is neglected in most of the textbooks. Tape programs and laboratory books accompany elementary textbooks, but the other supplementary materials accompanying tests for other languages are not available for the Italian texts. Cultural information is provided through literature, dialogue, maps, and pictures. Danesi concluded that few innovations are presented in these texts, in which a grammar-translation approach is used most frequently.

A chronological history of the objectives for teaching chemistry in the high schools in the United States during the years from 1918 to 1972 was prepared by Ogden (421). Statements found in the following periodicals were categorized under the headings of "knowledge," "process," "attitude and interest," and "cultural awareness": *School Science and Mathematics* (1918-1972), *Science Education* and *The General Science Quarterly* (1918-1972), *The Journal of Chemical Education* (1924-1972), *The Science Teacher* and *The Illinois Chemistry Teacher* (1934-1972), *The Bulletin of the Atomic Scientists* (1945-1972), and *The Journal of Research in Science Teaching*. Statements were later placed in subclasses of 18 distinct objective types. Ogden concluded from his content analysis that although there were fluctuations in respect to the number of articles and objective statements made, a number of distinct objectives remained constant. Sixteen of the 18 were found in all of the time subdivisions in the study; no objective appeared in the literature of later subperiods which was not included in the first subperiod. The objective which was mentioned most frequently related to scientific methods of thinking. Changes in the definition of scientific attitude were noted. In the earlier periods, the writers discussed chemistry content in terms of factual information; in later periods they wrote of underlying concepts or basic principles.

In a case study approach, Martinson (361) analyzed the coverage of the LaFollette campaign in 1924 to give insights concerning the criticisms of the press coverage of McGovern in 1972. The latter was not analyzed in this study, however. As a part of another study, Martinson surveyed news and editorial columns in 3 newspapers for a month before the 1924 election in which LaFollette aroused controversy even though he ran independently of the 2 major parties. *The New York Times'* traditionally moderate editorial point of view saw some good resulting from his candidacy, but at times expressed sharp disagreement with him. The *Chicago Tribune*, a supporter of Coolidge, the Republican nominee, directed its editorial campaign to stopping LaFollette. This paper depicted LaFollette as a radical, a dreamer, an idealist—one who would destroy the *Tribune's* America. The *St. Louis Post-Dispatch* displayed a more favorable attitude toward LaFollette editorially than the other 2 papers did. A large amount of negative coverage of LaFollette was found in both the *Times* and the *Tribune*.

An analysis was made of political news stories in 8 Colorado dailies, comprising 31 per cent of the 26 dailies in the state. Seven issues of each paper were analyzed, beginning with the day before the election day; a total of 301 articles were rated. The main purpose of this study was to compare the results of 3 methods of measuring bias in the reporting of political news: column-inches; the Budd attention scale, which includes the parameters of news story headings, page position, position in newspaper edition, and length of story; and the writer's scale value of headlines as classified by Stempel, including the streamer, spread head, 2 column head, major 1-column head, and minor 1-column head. The political orientation of publishers and writers was determined through editorial endorsements or written inquiry to the editors. This survey revealed 5 newspapers having Republican orientation; 3, independent; none, Democratic. Editorial opinion, bylined columns including political opinion, news of public business activities of incumbents, and letters to the editor were omitted. The 3 measures produced similar results. Overall, the coverage given the 2 parties was almost equal. However, the Republican papers gave the Republicans more space while the independent papers gave more coverage to the Democrats. Coffey (93) concluded that this content analysis showed strong probability that political news reporting was affected by management attitudes.

An extensive comparison of newspaper editorials dealing with electoral issues in Canada and in the United States was made by means of content analysis by Soderlund and Wagenberg (516). The newspapers were selected by pairing newspapers in the 2 countries: *Toronto Globe and Mail - New York Times*, national newspapers; *Ottawa Journal - Washington Post*, capital newspapers; *Windsor Star - Detroit Free Press*, border newspapers; *Le Devoir - Christian Science Monitor*, elite non-commercial newspapers; and the *Vancouver Sun - Los Angeles Times*, Western newspapers. Issues discussed in the editorials were classified under subheadings of 8 main headings: economic themes, foreign policy themes, environmental themes, socio-culture themes, political institutions, nationalism themes, miscellaneous themes, and political leaders. The analysis yielded numerous findings and conclusions. Differences in the socio-cultural level were reflected in the editorials. The tentativeness of the federal structure was noted in Canadian newspapers; the same structure in the United States was not discussed. Instead, problems common to large metropolitan areas throughout the country were stressed. Inflation and unemployment were of greater importance in Canada than in the United States and appeared to be crucial issues at the time of the Canadian election. American leaders are evaluated apart from their parties considerably more than are the Canadian ones. Papers within each country were similar in their coverage. The most outstanding characteristic of editorial treatment of the 2 campaigns was the tendency toward negativism concerning political parties, especially the incumbent party. Only 11 editorials in a 15-week period in 5 major United States newspapers treated Canadian issues; during the same time period the 5 Canadian papers included 76 editorials concerning issues facing the American electorate.

The study by Kaid (279) concentrated upon the extent that daily and weekly newspapers printed news releases distributed by political candidates, the emphasis placed upon different kinds of releases, and the handling of the releases when they are printed. The coverage of the 26 releases by a candidate for a state senate was monitored in 3 daily newspapers and 22 weeklies. Of the total releases issued, 18 (69 per cent) were carried by at least 1 newspaper. Of the possible 650 stories that could have resulted by the releases if used by all 25 newspapers, only 50 stories appeared. The major daily paper in the district carried 11 releases; the most published by any one weekly was 8. Nine papers did not print any of the releases. The news releases were categorized under 1 of 3 headings: 16 were "issues," 7 on "campaign-related announcements," and 3 on "personal, candidate related information." One hundred per cent of the announcement releases, 67 per cent of the personal information releases, and 56 per cent of the issue releases were carried by at least 1 paper. A major difference in the daily and weekly newspaper coverage was that the daily newspapers were more likely to carry issue releases than the weekly papers did. If newspapers published the releases, there was a tendency to print the stories verbatim.

A content analysis of newspaper political advertisements was conducted by Humke, Schmitt, and Grupp (264) to examine selected aspects of previous voting studies. The sample of advertisements was taken from *The Daily Pantagraph* published from September 1 through the date of the general elections held every 4 years from 1932 to 1960. Five categories of central themes were identified: candidate, issue, party, candidate-party, and candidate-issue. The most salient short and long term variables were identified; these included such factors as crime, age of the candidate, and similar concerns. A long-term variable was one that occurred in 3 or more elections and appeared at least 10 times across the 8 elections. Mid-term ones were those that occurred in 2 elections and appeared less than 10 times in all elections. All political advertisements were counted, and voter turnout figures were collected. The investigators found that candidates and issues, the short-term central themes, were clearly predominant in the advertisements. A party label was found in 88 per cent of the advertisements. The long-term subordinate variables were slightly more characteristic of the political advertisements than were the short-term variables when the voter turnout figures were compared with the number of newspaper advertisements. For this part, 2 extra years, 1928 and 1964, were added to make a total of 10 elections. The number of votes in the election were related to the number of advertisements. The highest and lowest number of votes occurred in a period when approximately the same number of people were eligible to vote.

Cole (100) performed a content analysis of science stories found in *The New York Times, Washington Post, San Francisco Chronicle,* and the *Minneapolis Tribune* for 3 different years. These newspapers were selected because they had the services of science writers, because they are somewhat geographically representative, and because they are considered to be among the leaders of metropolitan dailies. Each science story was coded for 67 variables, including the ones reported here: headline size, story length, accompanying photo, location of the mention of scientific conflict, and the news source of the article. Controversies of science were reported much more frequently and covered a broader range of subject matter in 1971 than in 1961 or 1951. A trend of giving science news articles greater editorial attention through headline size, story length, and use of photographs was also noted for 1971 over those of earlier years. Cole concluded that the foregoing findings supported the hypothesis that the newspapers performed the watchdog function to a greater degree in science reporting in the more recent years than in the past. The second hypothesis was also sustained: that science writers would report the conflicts of science less frequently than staff writers did.

The study by Ogan, Plymale, Smith, Turpin, and Shaw (420) concentrated upon the changes in the front page coverage of *The New York Times* during a 70-year period. Although the amount of front page news remained about the same in the issues studied, other changes were noted. The number of stories judged to be of long-range (future-time oriented), in-depth (analytic in style) significance increased 85 per cent from 1900-1905 to 1970. The use of bylines increased from no bylines in 1900-1905 to 85 in 1970. The latter finding was interpreted by the investigators as representing an increased professionalization of reporters. The *Times* consistently covered local news except during World War II when there was an increase of international news. A consistent increase in coverage of news from Washington was found, from 5 per cent in 1900-1905 to 38 per cent in 1970. In addition, the front page news stories have increased in length.

The front page coverage of news of violence in the *Atlanta Constitution*, the *Chicago Tribune*, and *The New York Times* was analyzed by Hester (252). He examined 1 issue per paper per month over a 50-year period by using a randomly selected date within each month but keeping the same date for each month during the period. He assessed the following variables: type of violence emphasized in the article, source of the violence item, placement of item on the page, and the textual or pictorial nature of the item studied. Less than 1/5 of the total items on the front pages of these newspapers was concerned with violence. In times of all-out war, however, the stories of violence approached 2/5 of front page coverage. In general, the same use of violent items was found for the 3 newspapers. Even though the 10-year period ending in 1973 was considerably above the average for violence on the front pages, Hester concluded that there was no definite indication that these papers emphasized more violence over time. Of the 3 newspapers, the *Chicago Tribune* used more violence items per front page, placed them in lead positions more often, and used pictures more frequently than did the other 2 newspapers. Nearly 3/4 of the time the *Times* used its own correspondents, but the other 2 newspapers were greatly dependent upon wire service as the source of news.

Meyer (386) examined *The New York Times* and the New York *Daily News* to ascertain if they were different in crime news coverage. Stories were matched during the period of August, 1970, to October, 1970. To be included in the analysis, they had to appear in both papers on the same morning and to report the same stages of detection or processing by the criminal justice department. The stories for the 37 events were analyzed by enumerating every informational bit dealing with the event, the offender, and the decision made by the authorities in each case. Column inches were also counted to provide continuity with previous research. The *Times* published more informational items and column inches for these 37 crime stories than the *News* did, but the difference was not statistically significant. There was little difference in the proportion of information which the 2 papers devoted to the crime or the offender.

Cohen (95) compared the coverage of crime news in Detroit (*Free Press, News, Michigan Chronicle*) and in Atlanta (*Constitution, Journal, World*) for a 2-week period. Both the amount of crime news coverage and the way in which this news was handled were analyzed and compared to the number of crimes committed in each city. The Detroit newspapers devoted twice as much coverage to crime-related events as did the Atlanta newspapers, but Detroit had more than 4 times as much crime. The Atlanta newspapers gave crime articles prominent coverage more frequently and were more likely to put crime-related news on the front page than the Detroit papers; the Detroit papers, however, used more than twice as many photographs and 5 times more banner headlines than the Atlanta papers; the Detroit papers tended to use more specific and gory details in violent crime news.

An analysis of press opinion concerning the brief vice-presidential candidacy of Eagleton was reported by Kreger (310). His purpose was not to quantify positions taken by different publications but to organize press commentary, to determine the major issues discussed by the press, and to examine the responses to these issues. The publications analyzed represented every section of the country, 42 cities in 27 states. More editorial comment was found in the largest newspapers and those that had the greatest degree of involvement in the story. The study began with the nomination of Eagleton for the vice presidency and reviewed the week following this nomination. Among the topics which Kreger analyzed and reported were the breaking of the news story of the "nervous exhaustion and fatigue" history of Eagleton, pro- and anti-sentiment which was expressed toward the candidate and toward McGovern for statements which he made, procedures in which vice-presidential nominees are selected, the resignation of Eagleton, and public attitudes toward mental illness.

The news coverage given the Santa Barbara oil spill by a national sample of newspapers was compared with that of local newspapers by Molotch and Lester (394). They determined the kinds of news subjects and news activities which became national events and those which did not. National newspapers were selected to represent a variation in geographical location, circulation, and prestige. The source, location within the paper, the length of the story, and the placement of the event within the story were recorded. One code was used for classifying individuals or groups involved as subjects, and another was developed for classifying the activities involved. Even though the story was one of the nation's big stories, none of the sampled newspapers was close to the local paper in terms of the number of occurrences covered. The California papers had more extensive coverage than did those farther from Santa Barbara. Among the variables related to the quality of the coverage, only the placement of the story in the newspaper proved significant. There was a tendency for all occurrences to receive more prominent play in the local papers than in the non-local ones. The results showed that the nationwide coverage of the activities favorable to oil companies was more extensive than the coverage given to conservationalists. Compared with local coverage, national coverage of activities was concentrated in the time period immediately after the oil spill.

Two types of speech codes, restricted and elaborated, formed the basis of the content analysis of the editorials dealing with the Korean War in 3 prestige newspapers (*New York Times, Christian Science Monitor, Washington Post*) and in 3 mass papers (*New York Daily News Boston Daily Record*, and *Washington Daily News*). Namenwirth and Bibbee (404) described the restricted code as one in which words are selected and combined in a simple, repeating fashion; in this case expression, not syntax, communicates complex meanings. In the elaborated code, words are combined and selected in a complex way different to each situation; meanings are expressed verbally. Of the 99 categories used, 40 discriminated significantly between prestige and mass newspapers. Factor analysis was used to detect the themes, or clusters of categories, found in the editorials. The following differences between the mass and prestige newspapers were noted in this analysis; mass papers were likely to be parochial in their explanation of the social environment, emotional in their justification of policies, and very much interested in material instrumentalities. Prestige papers are likely to be concerned with cosmopolitan, economic, rational, and symbolic issues. The findings confirmed the idea that mass papers used a more restricted speech code while prestige papers used a more elaborated speech code. The study was replicated in British mass and prestige newspapers. The findings, based upon factor analysis, were quite similar.

The major purpose of the investigation by Weaver and Mullins (577) was to ascertain if daily newspaper content and format are related to the extent of circulation of the paper when competition is present. They analyzed both content and format of 46 competing newspapers in 23 cities in the United States. Comparisons were made of leading papers (higher circulation) and trailing newspapers (lower circulation). Few significant differences were found in the content of the competing newspapers; the most striking difference was that the leading newspapers had more coverage in the categories of home, human interest, and sports news than the trailing papers. The leading papers devoted a higher percentage of space to advertising and less to editorial content, published more frequently in the afternoons, and subscribed to more news services than did the trailers. Trailing papers were more likely to use modern formats than did their competitors.

Kelley (288) analyzed 4 metropolitan newspapers (*Philadelphia Inquirer, Philadelphia Bulletin, New York Times*, the *Christian Science Monitor*), 4 Negro newspapers (*Pittsburgh Courier, Afro-American,* *Chicago Defender, Philadelphia Tribune*), and 6 magazines (*Crises, Collier's, Time, Life, Saturday Review, Newsweek, Opportunity*) to determine how they treated the signing of Jackie Robinson, the first black baseball player to become a professional, on October 24, 1945. The metropolitan newspapers treated the event with objectivity; only 1 considered it with history-making significance. The Negro newspapers exhibited more emotion than the other papers did, treated the event as a significant historical occasion, and kept the story alive for several weeks. The magazines dealt with the event after its development, with 4 of them treating the event in feature stories.

The purpose of the content analyses by Lumby (348) was to determine if there were significant changes in the value orientation in the Ann Landers' advice columns of 1958 and 1971. Seven letter types were identified with information seeking, comprising 83.6 per cent of the 1958 sample and 66.8 per cent of the 1971 letters. The frequency of letters in which the writer gave Landers advice increased by 5.6 per cent; there was a 5.4 per cent increase in the number of letters showing disagreement with previous writers. No significant differences were found in the letters agreeing or disagreeing with Landers. There was a significant quantitative decrease in letters emphasizing material goals and in the number of times Landers encouraged writers to seek religious counseling; a significant increase in the frequency of letters printed in the column concerned with manners and sex. Qualitative differences were also noted.

Stories in *Seventeen* during 1962 and 1972 were compared by means of content analysis by Ramsdell and Gaier (453). Only 5 of the 20 stories in 1962 dealt with an identity problem; but in 1971, 11 of the 20 stories were concerned with this theme. In approximately 1/2 of the 1962 stories, questions were raised about reality; in about 75 per cent of the 1971 stories, some form of question was raised. Questions asked in the earlier period were about minor issues, but those in the later period reflected questions of a deeper nature. Of the stories written by adolescents themselves the underlying tone was different in the 2 periods. The number of fiction articles decreased and the number of non-fiction increased during the 10 years in this magazine. Brief case studies of a number of the stories published in the 2 periods were given as examples of the foregoing findings.

The purpose of the content analysis by Lugenbeel (347) was to determine if a definite story pattern could be identified for fiction found in *Good Housekeeping*. The sample included 12 short short stories and 12 full-length stories selected from issues published within 1 year. Three analyses were done, 1 for each of 2 types of fiction and 1 combining the 2 kinds. A coding system was developed to include information concerning the protagonist, problems, goals, complication, crisis, decisions, and solutions. In the stories analyzed, the typical protagonist is female, age 26-35, with a problem defined as psychological. Her principal problem is social and related to sex and love. Approximately 42 per cent of her complications arise from her own actions. The decisions she makes are good moral ones and result in stories with happy endings. The theme of the fiction in this magazine is the emotional growth of the protagonist. Lugenbeel concluded that the fiction in *Good Housekeeping* adhered to formula writing, as most of the highest paying magazines do.

In an analysis of the content of stories from magazines designated as romance and adventure, Smith and Matre (514) found that these magazines tended to support the traditional male and female stereotypes. Stories were coded according to role segregation between sexes, and concerned attitudes toward sex and marriage, approval of stern punishment for illegal acts, perception of the character as helpless in a hostile world, and orientation toward stability and security. Quantitative and qualitative aspects of the romance and adventure presentations were noted. Among the findings are the following: In the adventure stories analyzed, women are of little or no consequence; men are very important in these stories of romance. Marriage is a goal in more than half of the romance stories but is not mentioned in 59 per cent of the adventure ones. The characters in both kinds of stories often perceive themselves as being in a hostile environment. The women in romance stories seek security, but the men in the adventure stories show little interest in it. The researchers concluded that the characters found in both kinds of magazines tended to support traditional American stereotypes concerning the roles of men and women.

A content analysis of advertising in magazines intended for male, female, and general readers was undertaken by Venkatesan and Losco (561) to examine the changes in the roles of women as portrayed in advertisements. Four magazines for each type of reader were analyzed. The advertisements analyzed were required to be at least 1/2 page in length and to include at least 1 woman. They were placed into as many of the 7 categories used as were appropriate. During the 13-year period, the 3 roles most frequently portrayed were women as sexual objects, women as physically beautiful, and women as dependent on men. Women were shown as housewives more often in the 1959-1963 period than in the latter 2 periods. The woman-as-a-sexual-object category appeared more frequently than any other in both men's and general magazines, followed closely by the woman-dependent-on-man category. The category of woman as physically beautiful was found most frequently in women's magazines. The trend analysis indicated a decline in many of the categories considered unfair, unrepresentative, and/or obnoxious by several women's groups. More changes were noted in women's magazines than in the other 2 types of magazines.

The investigation by Lantz, Keyes, and Schultz (326) was a content analysis of magazines for the period of 1825-1850. The results were compared with those in earlier studies. The investigators were interested in preindustrial American family patterns. Specifically, they categorized the content from 47 of the 57 important magazines of the period under 5 main headings. The content of 6 of the known magazines of the period was not applicable to this study, and 4 magazines could not be located. A total of 5,334 issues was considered. The investigators found that although overt power was most frequently exerted by the males, women also asserted their own power and influence, especially in regard to matters of child rearing and morality. Subtle power was also depicted as an important source of female influence. A marked increase in power of women and in the references to romantic love was noted over that shown in the earlier periods (1741-1794, 1794-1825). Almost all of the references to romantic love occurred in fiction and in poetry. Mate selection depended upon both romantic love and personal happiness. A significant move from a traditional to a more emancipated family emerged.

All of the content, including advertisements, of *Ebony* in 1967 and 1974 was analyzed by Click (92) and coded into 13 categories under the general heading of Significant/Useful Content or of 5 categories under the classification of Entertaining Content. Both editorial content and advertisements were analyzed. The 1967 editions of *Ebony* contained 1,856 pages with 54 per cent devoted to advertising and 46 per cent to editorial content. The 1974 issues, containing 1,920 pages, were comprised of 55 per cent advertising and 45 per cent editorial. More changes were noted within the 2 major headings than between them. Substantial increases in content within the 2 time periods were related to women as occupational models, contemporary black concerns, health (medicine), personal affairs, entertainment/amusements, and letters to the editor. Decreases were noted in the following kinds of content: race relations, foreign/international, politics, and black/culture/history/arts. Click concluded that the changes in content of the magazine seemed to correlate with changes in American society.

The principal purpose of the analyses of articles in the *Journalism Quarterly* made by Perloff (436) was to determine trends in the use of quantitative methods used in communication research and reported in the *Quarterly*. The percentage of quantitative articles published from 1955 to 1964 was compared with those published between 1965 and 1974. All full articles and research briefs dealing with print or electronic media were classified under 3 headings: print, if the article dealt exclusively with the print media (newspapers, magazines, books); electronic, if the study concerned radio or television only; and both media, if the articles dealt with both print and electronic media. Between the years 1955 and 1974, there were 1,490 articles published; 577 appeared between 1955 and 1964, and 913 between 1965 to 1974. Of these articles, 56 per cent were quantitative articles and 44 per cent non-quantitative. There were proportionately more quantitative articles and studies including statistical tests of significance in the latter period than in the earlier period. The most frequently used techniques were, in order of popularity: chi square, correlations, and analysis of variance. Between 1955 and 1964, 58 per cent of the articles were classified as print ones; 6 per cent electronic; 19 per cent, both media; 17 per cent, neither media. There was little difference in the percentages for the 1965 to 1974 period: 55 per cent print; 5 electronic; 23 both media; 17 neither media.

Through a content analysis of printed materials from oil organizations, major news magazines, and congressional and other governmental statements, Dangerfield, McCartney, and Starcher (118) were interested in determining the nature and use of the material intended for the gasoline consuming public and in ascertaining whether oil organizations attempted to reach consumers through appropriate governmental channels from 1971 through 1973, the time of the development of the gasoline "crunch." News items were counted in magazines and cross checked with material from the *Congressional Record* and industry-supplied materials. Warnings from oil companies that petroleum demand would exceed expectations were issued before 1971, but there was little consensus on the reason for the energy shortages which were developing. It was not until November, 1973, that the nation was told that a crisis existed.

Stein (525) used a case study approach to analyze 10 books published since World War II which are examples of muckraking. Muckraking declined in national prominence between 1912 and 1914, but by the mid 1960's it has made a resurgence in the United States. The following books were analyzed by Stein to specify muckraking characteristics: *One Thousand Americans*, *The Shame of the States*, *The*

Empire of Oil, The Welfare State, Unsafe at Any Speed, The Closed Corporation, The Case Against Congress, Military Justice Is to Justice as Military Music Is to Music, Let Them Eat Promises, and *The Washington Pay-Off*. Basically, similar beliefs and ideas were expressed in these books as in those during the Progressive era. Among the ideas muckrakers have emphasized are the following: a recognizable public interest superior to interests of any group or institution; moral responsibility of individuals both for evil conditions and for beneficent changes; the duty of the muckraker to enlighten Americans to effect worthy social change; the necessity of creating a just, democratic, and prospering social order. Differences were also noted. Modern muckrakers examine more subjects, seem more cognizant of the intricacies of social change, and more readily acknowledge the need of foreign people to enjoy the conditions traditionally justified for Americans.

Chinese daily newspapers published in New York were analyzed to determine changes brought about by an increase in the Chinese population. McCue (373) compared the newspapers which were considered to be leaders of change with those representing the old style Chinese press. The differences which were noted included the following: The new style published more factual features even though they included as much serialized stories and other fiction as the older papers did. Although the claim of 1 of the newer newspapers that it publishes more American national news than the others was not substantiated, it did have extended local coverage, including both Chinatown and New York. The ratio of advertising to copy is higher in the old style newspapers than in the new. Other qualitative differences were noted.

The emphasis placed upon race in the British national press was investigated through content analysis by Hartmann, Husband, and Clark (243). The analysis was divided into 2 parts: content related to Great Britain alone and that pertaining to overseas news from the United States, South Africa, Rhodesia, and British Commonwealth countries. Four daily newspapers (*The Times, Guardian, Daily Express, Daily Mirror*) were analyzed since they represented the British national daily press in terms of readership, political orientation, style, and format. Two were considered to be quality papers and 2, popular papers. Only articles in which colored people were a part of the main content were included. The length of the article was measured in column inches, and the number of British race topics included were counted. A list of 13 principal categories with varied number of subtopics was used for classifying newspaper content. All papers gave similar proportions of space to race-related topics. More content was concerned with race overseas than in Britain, especially in South Africa, Rhodesia, and the United States. Topics concerned with race overseas which received the most space in these newspapers included oppression, injustice, violence, and conflict among the races. British coverage of racial relationships was much more varied. The topics which received the most space were immigration and control of entry of colored people to England, relations between white and colored groups, discrimination and hostility between the groups and legislation. When a count was made of the number of references to race, a somewhat different picture of the British press emerged. Immigration and racial relationships were still included, but emphasis was placed also upon the topics of housing, education, and employment.

The treatment of Marxist-Leninist ideology in Soviet history, geography, and social science was investigated through computer content analysis by Cary (85). Instruction in history as a separate subject begins in the fourth grade with a survey course on Soviet history. Physical geography is taught in grades 5 through 7 followed by economic geography in grades 8 and 9. Social science is taught in only the tenth grade, the last year of secondary education. Since the teachers use the exercises at the end of units in the textbooks to evaluate the performance of school children, these exercises were analyzed. In order to use the standard American computers, the exercises were keypunched in transliterated form; each of the 33 letters in the Cyrillic alphabet was assigned 1 Latin letter or Arabic number. Stems of words were used. A dictionary consisting of words explicitly referring to the concept of Marxism-Leninism was prepared and used. Cary found that the emphasis upon the ideology analyzed in history and geography textbooks tended to increase over the grades in which the subjects were taught and that the average emphasis is greater in the senior than in the middle grades. Marxism-Leninism is emphasized more in history than in geography textbooks but to approximately the same extent in history and social science textbooks. A noticeable upturn in the emphasis upon the general facets of the ideology in geography and history books was noticeable between the seventh and eighth grades.

The purpose of the content analysis performed by Kringen (312) was to examine issues related to the *red-expert*, a term begun by the Chinese in the early 1950's and picked up by Western scholars. Although the meaning of the term has never been standardized, its use in Chinese politics has been extensive. A set of 81 documents selected from *Extracts from China Mainland Magazines* from 1958 to 1972, which included all of the articles in that translation series dealing with the *red-expert* question, formed the data base. Each magazine article included at least 1 reference to both terms (*red* and *expert*). The frequency type of content analysis was used through a count of the words in the text and aggregated into 21 categories developed by the researcher. In this study, the importance the author gave to a particular theme was determined through the frequency. Kringen assigned multi-meaning words to the categories he judged to be most appropriate. The analysis revealed that the most important themes in the Chinese discussions of the *red expert* issue were political/ideological, education, and management/organization, thus showing in part the multi-dimensional aspects of the issue. The emphasis placed upon the 21 issues in 2 communistic magazines was analyzed; the results of a factor analysis showed that the 2 journals approached the *red-expert* issue differently.

III-3 Readability of printed sources

Shamo (497) was interested in determining what linguistic variable could be used instead of the syllable with a computer to determine readability of written and oral samples of language. He used 45 one-minute radio commercials and portions of political speeches along with 36 samples of written materials, including newspaper articles, passages from textbooks, children's books, and news magazines. He used a computer program which yielded the total number of characters and of vowels. In addition, syllable counts were made by hand, and correlations of the 2 procedures were made. The results of the Pearson Product-Moment correlations revealed that all 3 variables could have been effective predictors of the man-calculated syllable count, with *r's* ranging from .97 to .99. Flesch scores based upon the original syllable count and a revised syllable computation were computed and compared. The results suggested that using character count or vowel count as an estimate of syllables produced Flesch scores very nearly like those based upon hand count of the syllables.

In a feasibility study, DeWeese (128) tested the use of computers in a content analysis of printed sources. In this study a half-million word sample of *The New York Times*, *Wall Street Journal*, and *Detroit News* editorials for even-numbered years from 1970 to 1972 was converted into a computer-readable form. Various alternates to manual key punching of data were described, including direct copy and high-speed optical reader. Since neither was available, 3 technologies were tested for text conversion: direct keypunch, key-to-tape, and type-and-optically-scan, especially the latter. The analysis was performed by the General Inquirer content analysis programs consisting of data-analysis programs, data-preparation programs, and computer-based dictionaires. To determine if the General Inquirer could be improved to handle large-scale text analysis, modifications were made which, in turn, indicated that the efficiency of the analysis method could probably be attained. The findings from the feasibility study revealed that on certain topics, the 3 newspapers were consistent; but on other topics, the biases of the individual newspapers became apparent. The emphasis placed upon categories showed much variation by year and by month. DeWeese concluded that at the present time, a large-scale system of computer content analysis is technically feasible but is expensive.

A computerized program to calculate the Dale-Chall readability formula was devised and tried out by Barry and Stevenson (34). The computation of a 500-page text on the CDC 3150 (Control Data Corporation computer number 3150) requires less than 3 minutes. Based upon the length of the words, the Dale-Chall 3000-word vocabulary is set up as a dictionary in arrays; the words in the samples of the texts are also sorted into arrays according to the number of characters in each word. The 2 arrays are compared. If the word from the text is not found in the dictionary, the suffixes and derivatives of the word are checked. A count is made of unfamiliar words except abbreviations, hyphenated words, proper names, and organizations. Word and sentence counts are maintained. Samples are fed into the computer using either typewriter terminals or punched cards. Restrictions and examples of the final output were included.

III-4 Reading interests, preferences, and habits

Nichols (414) hypothesized that a greater emphasis on foreign news in the media would result in a greater interest in international news by newspaper readers. College students were randomly assigned to 1 of 3 groups and were asked to participate in a survey of newspaper performance. The first group received a newspaper emphasizing foreign news content, the *Christian Science Monitor*. Another newspaper with less emphasis on foreign news content, the *Milwaukee Journal*, was read by the second group. Both groups read the same newspaper for 2 weeks. The third group was not given a newspaper and acted as a control group for the other 2. A content analysis had been done prior to the experiment to determine the emphasis given to foreign news in each newspaper. The 2 experimental groups were asked to read their newspapers as they would normally read a daily paper. The subjects completed a questionnaire which included different measures of interest in foreign news and its importance for a newspaper to cover. The data did not support the hypothesis.

To determine readers' perceptions and uses of the daily newspaper in today's society, Grotta, Larkin, and DePlois (218) conducted an in-depth study with a random sample of subscribers to a small daily Oklahoma newspaper. Interviews were conducted with husband and wife teams, when possible, concerning their newspaper reading habits. When asked the source through which they obtained most of their news, 87 per cent cited television and 31 per cent mentioned newspapers when they referred to national-international news. For local news the results were reversed, with 80 per cent referring to newspapers and 48 per cent specifically mentioning the local newspaper. When asked if they read the regular feature items, 57 per cent said they read the local ones almost every day; 21 per cent stated that they read the non-local ones almost every day. The highest average readership for the previous day by type of content was for advertisements, followed by local content. When asked if they would like for anything to be added to the newspaper, 72 per cent of such requests were for information local in nature. To understand the use made of advertising, the subjects were asked to name the 5 stores where they did most of their shopping. The stores most often mentioned were among those using the greatest amount of newspaper advertising space.

Bryant, Currier, and Morrison (64) conducted a study to determine whether readers' attitudes and behaviors are related to the newspapers they read and like. They were interested in seeking a technique to define newspaper audiences other than demographic variables. An hour-long questionnaire was administered to a representative sample of 900 adults. The questions measured attitudes, activities, and newspaper reading of the subjects. Examples of items in the attitudinal portion were satisfaction/dissatisfaction with government at different levels, with schools, with shopping facilities, with television, and with radio and other perceptions of the quality of life. Items on the questionnaire related to the degree of readership of different newspapers. Activity factors included both participation and spectator factors. Through factor analysis, 16 factors were developed to represent ways of scoring individuals on the basis of their attitudinal and behavioral life styles. The subjects were scored as strong, moderate, marginal, or non-reader for each newspaper. The characteristics of the strong readers for each newspaper were determined. Distinct differences were found among the strong readers for different newspapers. The investigators concluded that this life style-related approach offered new insights for a newspaper to describe its current readers, to determine what of its content appeals to its readers, and to identify content that might appeal to groups not currently readers.

The study reported by Fett (172) is a part of a larger investigation on mass media production and use conducted in Southern Brazil. The subjects were a random sample of all farmers who subscribed to the local bi-weekly paper. Data were collected through interviews held on farms with the heads of families. The 5 major agricualtural products sold in this particular locality were determined. The farmers were asked questions about their information-seeking and marketing habits concerning the products which brought them the most and second most income. The information received was about the same for both products named, but the farmers searched more market information for the product sold in the least restrictive market. Fett concluded that the value of information was a function of the latitude of decision making open to a farmer and of how well the content aids him in carrying out a course of action.

The main goal of the study by Dimitrijevic and Gunton (134) was to learn what books young people in Belgrade read and what kind of young people read them. A secondary purpose was to discover something about the reading experience of secondary school pupils and university students of English. The subjects completed a questionnaire principally concerned with their book reading habits of materials written in English. Although most libraries close early in the evening, 70 per cent of the subjects reported reading mostly in the evening. When asked to state how many books in English they had read, 54 per cent of the fourth-year students had not read 50, a number considered too low by the investigators. Although 99 per cent of the subjects considered reading to be an important factor in language learning, 67 per cent felt they did not read enough. Insufficient time was the reason given by 82 per cent for not reading more. The favorite literary form for 78 per cent was the novel. The favorite foreign authors were, for the most part, those listed in the English syllabus. Both groups of subjects preferred the following authors in order of choice: Tolstoy, Dostoyevsky, Hemingway, Shakespeare, Pearl Buck, Balzac, Remarque, Camus, Zola, and Hugo. The investigators concluded that the reading experiences of the students learning English were broad since they read widely in the classical literature of Europe and the United States. However, their reading is course-oriented, and reading skills are not fully utilized.

III-5 Professional reading of university professors

The periodical read by more college and university professors in the United States than any other, according to the results of a survey by Ladd and Lipset (320), is *Time*, followed by *Newsweek* and *The New York Times*. Faculty members at major universities prefer *The New York*

Times, *Time*, and *Science* in that order. Among cultural journals, *Saturday Review*, *The New Yorker*, and the *New York Review of Books* had the largest academic readerships. *Science* is the most widely read of the more specialized journals. Journals emphasizing political opinion and policy analysis are read by a relatively small number of faculty members. The frequency of readership for the 25 periodicals surveyed was not related to intellectuality, religion, or social background. Activism was the only variable considered that had any relationship to the type of journal readership; the more a faculty member was trying to influence events in society, the more he or she read journals containing social, political, economic, and cultural commentary. Those who read less widely were the academics or those who were bound by scientific demands to their disciplines. The academic discipline and the ideology of the professors were also factors determining the journals they read.

III-6 Literacy

The aim of the report by Downing (137) was to determine commalities and differences of the literacy learner's experience in different cultures. This particular purpose is a part of the long-term goal of the use of the comparative method to gain insight concerning psycholinguistic processes of learning to read and to write. Fourteen countries which represented cultural and linguistic differences in literacy learning (different alphabets, regular and irregular grapheme-phoneme relationships, syllabic or logographic writing systems and alphabetic systems, and educational patterns (and the like) were selected. Specialists from each country wrote descriptions of literacy learning in their particular countries. The results showed that either motivation or cognition provided the basis for a simple model of the literacy learner's general situation in all the cultures studied. Two factors were considered for cognition: the learner's own linguistic experiences and the expectations of literacy responses appropriate to his culture. This cross-national study revealed 3 variables important to the task of literacy learning: the learner's own spoken language, the writing system used in the early stages of learning to write, and the spoken language of the teacher.

Cripwell (114) compared simplified documents produced by British and Rhodesian governments which were explanations of the settlement proposals to Africans. Cripwell compared the documents in terms of syntactic complexity and lexical choice and in terms of the people for whom they were intended. Literacy in Rhodesia consists of being able to speak, read, and write English, the official language. The 2 principal African languages, Shona and Sindebele, are largely spoken languages. The 2 main channels of language communication which Rhodesian and British authorities can use are written English supported by written translations in Shona and Sindebele and spoken English translated into spoken Shona and Sindebele. A large proportion of the African population has received some formal education in primary schools but may not have reached the fifth grade. Cripwell doubted how effective this education is in terms of literacy. He pointed out the difficulties in translating from English to the native languages: nuances in meanings in each language; long sentences in Rhodesian documents; complexity of structure of languages, as the use of subordination and the use of passive voice; vocabulary choice; cliches; and the choice of content included or omitted. Cripwell concluded that there were serious doubts about the effectiveness of the documents for whom they were intended. The language of the Rhodesian document was clearly more difficult than the original paper and too difficult for most of the Rhodesians to understand.

The functional literacy program in India was described by Prasad (443). Over 80 per cent of the population lives in 566,900 villages. In the rural areas, 80 per cent are illiterate. The literacy project was begun in 1967-1968 as a cooperative venture of the Ministries of Agriculture and Irrigation, Education and Social Welfare, and Information and Broadcasting. The program has been organized in 107 districts, each district being comprised of 60 village centers, to benefit more than 300,000 farmers. There are definite plans to enlarge the program. In each center, 30 adults are admitted for a 10-month course, receive help concerning practices connected with all agricultural operations, and are instructed in elementary reading, writing, and arithmetic. The salient findings from the evaluation of the program include the following: The impact of the project has been satisfactory, with the response of the farmers gradually becoming higher than in routine literacy work, principally because the farmers are aware of the practical aspects of the program. A significant improvement in knowledge and adoption of improved agricultural practices has resulted. Scores were higher in arithmetic than in reading and writing. At the time of testing, 2/3 were able to comprehend what they read. The attitude of the farmers has improved; they have applied what they have learned; their attitudes toward new agricultural practices and the education of their children have improved. Some increase in the average yield per acre was found in the villages with well organized functional literacy centers. Those who took part in the projects exhibited more favorable attitudes towards modernization and socioeconomic improvement of their communities than they did prior to instruction.

In the Arab states, 86 per cent of adult women, 15 years and older, are illiterate, according to Mustaffa-Kedah (402). The problem of illiteracy is not due to discrimination against women but to limited opportunities for both sexes. In all Arab states, the right of girls to an education is recognized. Formal education for girls developed rapidly following World War II and the decolonization of Arab states. The number of girls enrolled in all educational levels increased from 1 million in 1950 to over 5-1/2 million in 1970. Women constituted 30 per cent of the students enrolled in 1950 and 35 per cent in 1970. At that time 43 per cent of the 10 million girls were enrolled in primary schools; yet this number represented 79 per cent of girls enrolled in all 3 levels of education. The obstacles to the enrollment of girls in primary schools include a serious shortage of qualified teachers, a corresponding shortage of material facilities, unfavorable attitudes toward the education of girls, the need for girls to assist at home, and too few suitable role models to guide a girl toward education and a professional career. The situation for women in the Arab states is disadvantageous, even when compared to that in other developing countries. The corresponding illiteracy rate among women in the developing countries as a whole was 60 per cent in 1970. Non-formal education for women has been encouraged by mosques and religious schools where literacy was taught for those who wished it. Literacy campaigns have been launched by the government.

A study by Grundin (219) was designed to determine the extent of Swedish functional literacy at different age levels. A second purpose was to attempt to arrive at an operational definition of a minimal satisfactory level of reading ability at different student levels. A test battery was administered twice to samples of students at grade levels 6 to 12 and included the following: comprehension tests of normal prose measured by a multiple choice test and by a cloze test; tables concerned with housing allowances; everyday forms, such as bank and health insurance forms; difficult prose, such as a home insurance policy; and a test measuring rate of reading normal prose. With the exception of those receiving the highest percentile marks in grades 11 and 12, the results showed an increase in reading comprehension from grade to grade. The average performance in the best grade 6 class was higher than that of the weaker grades 10 and 11 classes. In another part of the study, head teachers responded to a questionnaire in which they stated the number of items they thought students of average intelligence should answer correctly and the importance of the skills measured in the multiple choice test. Although there was considerable variation in the numbers teachers thought students should answer correctly, the large majority considered the kinds of reading comprehension skills measured to be very important.

When the members of the International Institute for Adult Literacy Methods (268) analyzed UNESCO records concerning illiteracy, they found that 60 per cent of the women throughout the world today are illiterate and that the proportion of women illiterates is increasing. Conversely, the total adult illiteracy rate is slowly declining. In 1950, 44.3 per cent of the population was illiterate; in 1970, 34.2 per cent. Of the total number of illiterates in 1960, 56 per cent were women; in 1970, 60 per cent. More specifically, in the 10-year period, the number of male illiterates increased by 8 million and females by 40 million. It is estimated that of the 784 million illiterates, 468 million are women. Illiteracy is more prevalent in rural areas than in urban ones and more prevalent in developing countries than in developed ones. In developed countries, the representation of boys and girls in both primary and secondary schools is nearly equal; in developing countries girls comprise 40 per cent of the primary schools' total population and 35 per cent of the secondary schools' total enrollment. The Institute concluded that although women constitute 51 per cent of the population of the world, the majority of these women are still largely excluded from contributing to the development of many countries.

III-7 Social and cultural influences

Denbow (124) replicated an earlier study by another investigator to determine variables which would be predictors of newspaper subscribing behavior. A scoring scheme ranging from 0 to 3 was used to rate certain characteristics of the chief breadwinner in a home or household. These characteristics included age, occupation, and education of the head of the family. Data were obtained through telephone interviews. Although the total index held up well, the individual variables made the division between the groups sharper than did the total index. Within the age 18-24 bracket, 25 per cent of the households were subscribers; within the ages of 35 to 48, 86 per cent subscribed. When the chief breadwinner was a student, 5 per cent subscribed to the paper; when the head was a professional, 87 per cent subscribed. No educational category showed a subscription rate of less than 57 per cent. In rating the household, the index as a whole was a better predictor of subscribing behavior than were the individual items.

The main focus of the study by Goldenberg (199) was to study the relationships between 4 resource-poor groups (Legislative Council for Older Americans, the People First, Cape Cod and Islands Tenants' Council, and the Massachusetts Welfare Rights Organization) and 3 daily and Sunday newspapers in Boston. The study dealt specifically with the conditions under which the resource-poor groups gained access to newspaper space, the dynamics of the access process, and the results of the group-newspaper relationships. The following are selected conclusions from those which Goldenberg made: Group leaders do not constantly seek access to the metropolitan press, but they are likely to seek this access when goals assume high priority, when they are attempting to reach targets which are large and graphically dispersed, and when the newspaper has a high positive reputation. Access to the press for the resource-poor is virtually always dependent upon group initiative. Continuing interaction is necessary for continuing access, but most resource-poor groups are unable to establish regular interactions with metropolitan news reporters.

III-8 History of books, magazines, and newspapers

A detailed history of the Pulitzer prizes for books, drama, music, and journalism for a period of 6 decades was prepared by Hohenberg (258). Made possible through the planning and the benevolence of Joseph Pulitzer, the prizes were first awarded in 1917. In his will, there were provisions for 4 journalism prizes, for 4 in letters and drama, for 1 in education, and for 5 as traveling scholarships. Of those in letters and drama, only the history award remains substantially the same; the specifications for 3 of the journalism awards today are similar to those described earlier. Included among many items of information in the book are descriptions of the composition and work of the Advisory Boards, anecdotes and thumbnail biographies of many of the winners, accounts of non- and near-winners, reactions to and of the winners, the influence of the periods during which the prizes have been awarded, the categories of competition which were added to the original list, and the difficulties experienced at different times by the various forms of literature. Since 1917, the 714 awards have been won by 657 individuals (591 men and 66 women), 57 newspapers, 1 book publishing company, 1 newspaper chain, and the recipients of 2 groups of awards that went to World War II correspondents and cartographers. There have been 58 multiple winners among newspapers, newspaper people, and recipients of the literary, stage, and music awards. Also, 46 prizes have been skipped—19 in journalism and 27 in non-journalism categories. There have been 398 prizes awarded in journalism, and 316 awards have been designated for letters, drama, and music. Hohenberg listed the multiple winners, 7 sets of family winners, and the oldest and youngest winners. Awards have been made in the following categories: for journalism—meritorious public service, reporting, local general reporting, correspondence, telegraphic reporting (both national and international reporting), national and international reporting, editorials, editorial cartoons, photography, spot news photography, feature photography, commentary, criticism, newspaper history, and special citations-journalism; for literature—novel and fiction, drama, history, biography or autobiography, poetry, general non-fiction, special citations-letters; for music; and for Pulitzer scholarships.

Shepard (499) described kinds of street literature and discussed the printers, publishers, and pedlars connected with it. Although this form of literature has been neglected by literary historians, it has influenced many people. Street literature includes—among other forms—broadsides (sheets printed on 1 side). These were the vehicle for ballads, proclamations, and woodcut illustrations. Street literature also includes pamphlet literature, such as news books, religious and political tracts, almanacs, and chapbooks. Other types of street literature includes love songs, riddles, conundrums, playbills, exhibition papers, and street notices. In the broadest sense, street literature began with paintings on the walls of paleolithic caves and long before the invention of printing. The printed forms of street literature stemmed from an oral traditional culture growing out of folk music, dance, and story upon which printing was superimposed. European folklore is considered to be a recasting of the fragments of ancient religion. The broadsides and chapbooks began in the early sixteenth century; they flourished in the seventeenth, died down in the eighteenth, and flared up once more in the nineteenth. Currently, their influence survives in the popular newspaper press, music of Tin Pan Alley, radio and television, modern revival of folk music, and the development of pop culture. Such expression became and has continued to be the voice of the masses. The influence of street literature was manifested in several ways. Chapbooks and ballad sheets taught underprivileged people to read, sustained literacy in people too poor to purchase books, and created an interest in books. Broadsides and chapbooks had much influence on sophisticated literature; the broadside ballads influenced printing history by contributing to development of aesthetic aspects of typography and layout; modern newspaper advertising began with the news pamphleteers of the early seventeenth century. Shepherd's book includes many examples of the various forms of street literature.

The Chronicle of Higher Education, a specialized newspaper for college administrators, has emerged as an important source of information for college administrators. According to Currie (116), the growth in paid subscriptions reflects its usefulness in decision making and other administrative functions. The results of a mail survey showed that believability and utility were the main reasons for the 75 per cent renewal rate. The non-affiliation of *The Chronicle* heightened its credibility for 60 per cent of the survey respondents. The average paid circulation is almost 36,000. A pass-on rate of 3 out of 4 subscriptions revealed the multiple readership of the paper. High proportions of the respondents considered the weekly as *very* or *somewhat important* and referred to its information when they made decisions. It has made important contributions to the professionalization of administrator functions, elevation of faculty awareness, nationalization of educational perspective, and regularizations of the delivery of federal information. Currie concluded that *The Chronicle* appears to supplement, not supplant, other existing publications.

The emphasis in a study by Hynds (267) was on various aspects of newspapers during the 1970's. To prepare the reader for a consideration of current journalistic developments, he traced the development of American newspapers from precolonial periods to the present time. In addition to dailies, types of newspapers based primarily on purpose and audiences now published include the following types: suburban newspaper; weeklies and other non-dailies; black newspapers; college newspapers; special interest newspapers, such as Chicano, business, military, free, and prison newspapers; and alternative or underground papers. Also included in the report are discussions of "new journalism" (advocacy, alternative, underground, precision, and new non-fiction); various sources of news (reporting, wire services, newspaper syndicates); newspaper performance concerning the coverage of big stories (on violence, conflict, human rights struggle, ecology); organizational patterns of newspaper; developments in photography; the relationship of the President and the press; access to information; various aspects of the free press; and revolutions in newspaper technology, such as letterpress developments and changes, photocomposition, offset, and electronic revolutions. Many examples of newspapers and newsmakers were given. Also included were brief case studies of newspapers regarded by many to be the best. Among those included were the *Christian Science Monitor*; the Dow Jones newspapers (*The Wall Street Journal, National Observer, Barron's National Business* and *Financial Weekly*; *The New York Times*; other New York dailies; Washington dailies; New England leaders; Midwest newspapers (*St. Louis Post-Dispatch, Milwaukee Journal, Chicago Tribune, Kansas City Star*); Southern newspapers (*Louisville Courier-Journal, Miami Herald, Atlanta Constitution* and the *Atlanta Journal*); Southwest newspapers, and Western newspapers (*Los Angeles Times, San Francisco Chronicle, Portland Oregonian*, and the *Denver Post*).

Uncle Remus's Magazine was founded in 1907 by Joel Chandler Harris and his son, Julian. Publication ceased in 1913. According to Mugleston (399), the magazine was dedicated to the cause of sectional and racial reconciliation. The first issue was so popular that the 125,000 copies were sold out in 5 days. By the end of the first year, there were subscribers from every state then in the Union, as well as from 7 foreign countries. Harris refused to allow any sensationalism in content. The magazine became more attractive; advertising and circulation increased; the press praised the magazine. Yet the magazine did not attract many first-class writers. Julian Harris succeeded his father but encountered many difficulties. Although the principal stockholders wished to discontinue the publication, Julian managed to keep the magazine alive for 4-1/2 more years with toil and worry, and in spite of a lack of money. Noticeable changes occurred in the content of the newspaper. The quantity of fiction decreased, but the quality increased. The magazine then included columns, historical features, and articles pertaining to social and political affairs. Harris himself wrote about politics and current events. He also wrote editorials which brought severe criticism, such as those favoring the 2-party system in the South and those pointing out the injustices done to the poor people when they were accused of crimes. When the magazine continued to lose money, it was finally discontinued.

In tracing the development of the Catholic newspaper press in the United States, Real (458) divided its history into 6 different periods determined by the policy of the press at specific times. During 1833-1889, Catholic journalism was largely independent of the Church and adopted a policy of being intent upon defending Catholicism and ethnic ideals when the various nationalities felt that their faith was threatened by the dominant Protestant culture. Between 1890 and 1918, the press became more church oriented. The Catholic Press Association was formed in 1911 and initiated various services, including a rudimentary news service. Consolidation of the services and of power occurred during the period 1919 to 1945, and the press became sectarian. In the following period, from 1946 to 1961, an expansion of services was noted. At this time there were several national chains, a central news service in Washington, and diocesan saturation subscription plans. During 1962 to 1968, the bishops had a new tolerance for freedom of the press, promoted progressive reform positions on many religious and secular issues, and rewarded aggressive independent reporting of church affairs. The result was a boom period for Catholic journalism, with traditional points of view giving way to critical, controversial news coverage. By the last half of the decade, both freedom and controversy were present in the American Catholic press. From 1968 to the present time, a stabilization occurred. The religious, political, and economic forces that contributed to the liberalization of the Catholic press had reversed by the end of the decade.

Altschull (10) traced in detail the growth of the democratic press in Germany to the collapse of free institutions in the 1930's. Newspapers have been more prevalent in the German-speaking world than anywhere else. Before the Nazis came to power, there were 2,483 daily and weekly newspapers in the Weimar Republic, which had a population of slightly more than 65 million. During the eighteenth century, the Prussian journalists accepted—seemingly without much protest—the directives of the crown. A few journalists agitated for liberalization of the press. By the middle of the nineteenth century, liberal newspapers sprang up all over Germany. However, none of the constitutions adopted during the foregoing centruy contained specific guarantees of press freedom. The 1849 Constitution contained a clause guaranteeing freedom of expression with implied freedom of the press to some people. Despite this clause, Bismarck suppressed the writings of Prussian journalists regularly and persuaded King William I to issue an edict denying the newspapers the right to criticize the government. Under Bismarck's successors, the German press became as free as any other European newspaper to engage in public criticism of national leaders. Two main types of newspapers were prominent during the Weimar period: the political (or ideological) press and the commercial press. One of the primary objectives of the Nazis was to replace the non-political mass press with a political one. Much of the German press at first appeared to be unaware of the threat to liberty posed by the Nazis. When Hitler came to power, his first act was to dismantle the democratic press.

III-9 Book publication

Many aspects of book publication are reviewed by Dessauer (127), who presented a brief history of book publication but emphasized current concerns. Included are definitions of the technical terms related to the book industry; descriptions of how books are created, manufactured, marketed, stored and delivered; and explanations of the ways publishers finance, plan, and manage publication details. Specific information is included concerning the role of literary agents, reasons for book failures, and book markets for hard and soft cover trade books, juvenile books, paperbacks, religious books, professional books, scholarly books, and textbooks. Details are given concerning type used, typesetting and printing methods, binding, and scheduling of publication dates. The marketing of books is discussed in terms of retail markets, booksellers, book clubs, wholesalers and jobbers, schools, and marketing rights.

III-10 Juvenile books

Because the difficulty of Newbery Award books had been given as one reason that children neglected these books, Schafer (489) determined the minimum reading grade level of the award books from 1940-1973. He used 2 readability formulas: the Botel Predicting Readability Levels and the Fry Formula. The results of his analysis showed that 3 were within the fourth grade reading level, 6 fifth grade, 13 sixth grade, 10 seventh grade, and 2 eighth grade.

Lystad (351) traced the changes in the content of children's books published in the United States since 1646. Her purpose was to determine attitudes, values, and feelings of people which are reflected in juvenile literature. In colonial days, the books had strong religious overtones with death as a goal of living. The spirit of patriotism abounded in these books after the American Revolutionary War. In both these periods, the books were influenced by English ideas and tradition. Advice on how to succeed in work was given to the boys, and advice on how to be pleasant, kind, and gentle at home was intended for girls. The emphasis on family life changed the character of children's books around 1850. Family novels, such as *Little Women*, *Elsie Dinsmore*, and *The Five Little Peppers and How They Grew*, appeared. Lystad notes social commentaries on social norms and morals in *The Adventures of Tom Sawyer* and *The Adventures of Huckleberry Finn*. He discusses American folklore in *Nights with Uncle Remus*, and the publication of European fairy tales in this country in the 1800's, culminating in the first U.S. edition of *The Wizard of Oz*. The Victorian method of child rearing was firm, but kind and loving. Boys were characterized as being active and adventuresome; girls were submissive and proficient with home duties. Most of the characters were white; minorities which were included were described as incompetent and lazy. A strong interest in children *as children* appeared around 1920. In 1919, the Macmillan Company became the first publishing house to establish a separate children's book department. Series books, such as *Nancy Drew* and *The Hardy Boys*, became popular. Technological advances in printing were reflected in the 1920's in children's picture books, such as *Millions of Cats* and later in the Dr. Seuss books. Today authors treat children's feelings and social problems with openness, reflecting more understanding of the child. And children are given more independence. Male and female characters are still treated differently.

From his survey of 8 major children's collections in libraries in the United States, Kabak (276) found that none of the libraries used specific criteria concerned with racism and/or sexism when new and old books were analyzed. However, those interviewed believed that racism and sexism were important issues that should be considered for the selection and retention of books. Selected comments concerning these 2 issues from the librarians in Atlanta, Denver, Los Angeles, Chicago, Philadelphia, Scarsdale, San Francisco, and New York are included. Policies for elimination of old books and for the evaluation of old and new books are discussed.

III-11 Newspaper publication

Counts (111) investigated accuracy in newspaper reporting in relationship to high and low source credibility and agreement and disagreement with the source. Specifically, he studied the effect of the number of supportive *inferences* (those that the source makes to support his point of view) and the number of speaker *judgments* by the source on the reporter. The effect was studied under the conditions of *agreement* and *disagreement* with a message and perceived high and low credibility of a source. Inferences and judgments in this study were statements which subjects thought reinforced or contradicted established opinions; facts were considered neutral. The subjects listened to tape-recorded speeches, rated the speaker's credibility, wrote a news story based upon the speech, rerated the speaker, and responded to a 10-question "agree"-"disagree" scale based on the content of the speech. The results showed that the subjects stated more supportive inferences under the condition of agreement with the source than under that of disagreement; but they were not influenced by source credibility when reporting these inferences. Non-supportive inferences were given more when the reporter disagreed with the content of the speech. The number of subjects reporting and not reporting judgment statements was related to a combination of credibility and agreement. No differences in the number of facts reported were found among the conditions. The subjects did not make more errors under the conditions of low credibility and disagreement with the source;

nor did they make more inferences about the meaning of the message in low credibility or disagreement with the source.

Neighborhood public affairs publications perform a different function than the community press, according to Ward and Gaziano (571). Such publications differ from traditional newspapers in ownership, control, purpose, staffing, and audience. Editors of 13 newspapers and 10 newsletters were interviewed in a 2-week period concerning various aspects of their publications. Current copies were examined to determine the completeness of the editors' answers about content categories and to study formats. Among the numerous results reported are the following: neighborhood associations started the largest number of the publications. All but 3 have begun publication since 1969. Seventeen are monthlies, while the others are bi-monthly, bi-weekly, or are issued irregularly. The circulation varies between 500 and 25,000. The editors define the function of their publications in political or public affairs terms. Most of the stories in the publication originate from the writers' or editors' personal knowledge.

Newspaper supplemental services, which are sometimes referred to as syndicates, offer a variety of services, such as cartoons, celebrity columns, and political columns. Singletary (507) studied newspaper use of the supplementals and related the supplemental service to the major wire services. Data from the years 1960 and 1973 were compared to data collected in another study for 1970. Data were obtained through reports from newspapers voluntarily contributed to a publisher. The results showed that increasingly fewer publishers, especially those having the smallest circulation figures, were subscribing to both the major wire services, AP and UPI. The number of newspapers using the AP service remained almost constant, but the number subscribing to UPI dropped by more than 100. Rapid growth of 2 of the newer news services, *The New York Times* News Service and the *Los Angeles Times - Washington Post* News Service, was noted. These 2 supplemental news services accounted for 62 per cent of the reported supplemental news service subscriptions. Two other news services, Copley and NEA, almost doubled their subscriberships; that of the *Chicago Daily News* remained approximately the same.

Lister (343) investigated the nature, history, and development of the suburban press through a survey of journalists in suburban communities. The sample was taken on both random sample and census basis to make certain that large, multiple paper organizations were included. The others, representing a wide range of frequencies, circulation sizes, and geographical locations, were selected on a random basis. The survey yielded numerous findings. Among those pertinent to the sociology of reading are the following: writing style, sentence structure, news judgment, and gatekeeping are similar among the various types of newspapers—whether they are metropolitan or suburban. The attitudes of those involved appear to make the suburban papers different from city ones and to make them the reflection of the communities they serve. The bulk of the readers of suburban newspapers also read metropolitan dailies. Suburban newspapers include an extensive coverage of local news. A movement among many metropolitan papers has been made to include suburban sections and zoned editions. An important development is that the big, in-depth, investigative story has become a part of the suburban news; the questionable practices exposed have brought about changes in a number of instances. The major conclusion from the report was that the suburban paper represents a separate entity and is different from either the small town community paper or the metropolitan daily paper.

The goal of the study by Wackman, Gillmor, Gaziano, and Dennis (567) was to determine if chain-owned newspapers were homogeneous in their endorsement of presidential candidates. For the years between 1960 and 1972, 142 different chains were identified, although they were not all in existance for each of the 4 election years because of mergers, chain purchases, newspaper failures, and similar circumstances. All newspapers in the study were coded for group membership or non-membership. Patterns of chain membership and editorial endorsements were both considered in the analysis of the data. The following changes were noted in newspaper chains during the 12-year period: Both the number and the average size as well as geographical characteristics changed; more chains became national in scope; national corporations in 1972 controlled 19 per cent of the nation's daily newspapers. The investigators found that non-chain newspapers were less likely to endorse any candidate in every election year and that chain papers were more likely to support the candidate favored by the press in every election. In general, the papers within chains overwhelmingly supported the same candidates—except in 1964. They also were high endorsers, with at least 2/3 of the chains endorsing a candidate. The multiple region chains were consistently less homogeneous in their endorsements in each of the elections.

III-12 The foreign press

Aspects of newspaper editorial decision-making in the United States were compared with those in Japan and Korea by Nam (403).

Comparisons were made between the findings from questionnaires completed by newspaper editors in the United States and those from interviews with decision-makers of Japanese and Korean newspapers. In all 3 places, daily newspapers tend to be strong supporters of the status quo. In the decision making process, the publisher, the editor, and editorial writers depend upon the intensity of the issues and the personal style of the publisher. Normally, editors, not the publishers, supervise the editorial writing. Japanese and Korean newspapers tend to have between 10 and 20 editorial writers; the ones in the United States have an average of 2.7 editorial writers. Korean and Japanese newspapers maintain complete neutrality in times of elections and do not endorse any candidates. The issues stressed in the newspapers surveyed varied in each country. One major difference noted between Korean and Japanese papers was that outside pressure influences editorial position in Korea but not in Japan.

Thoren (542) examined how the time of sending news from wire services influenced the publication and use of foreign service news in Swedish newspapers and compared the results with those of other studies. Based upon the findings of the study, the following conclusions were drawn: the 3 news agencies (AP, UPI, and TT) have similar patterns when wire stories are filed. The flow of foreign service to the news agencies and from them to newspapers tended to decrease at the end of any week. There are tendencies for daily metropolitan newspapers to receive approximately the same number of news stories per hour from noon to deadline. Such papers publish less foreign wire service copy filed before noon and use more foreign wire service news copy the closer the filing time comes to their deadlines. The latter trend is not supported by previous findings.

Smith (with Immirzi and Blackwell) (508) made a critical study of the content of 2 British daily papers, the *Daily Express* and the *Daily Mirror*, to examine how the popular press interprets political and social change to its readers and to develop a method of close analysis of content of material. These 2 papers were chosen because they provide striking contrasts, personalities, and styles; they also represent opposite positions in the political party structure. Smith selected the period from World War II to the mid 1960's because he wanted a period long and varied enough to test the response of the press to historical change in depth. The overt political attitudes and underlying assumptions about the political process, as well as the treatment in the press of changing life styles in society, were studied. A detailed case study was presented for each newspaper.

The study by Marquez (359) aimed to determine if Phillipine advertising reflected Phillipine culture. The 1,027 advertisements which were analyzed were taken from 2 daily newspapers and 2 weekly magazines published in the Philippines between 1970 and 1972. The contents of the advertisements were analyzed for male-female roles, the concept of masculinity and femininity, personality type, family type, social class, ethno-centrism, the concepts of time and space, and racial image. The results indicated that the portrayal of Philippine culture was the antithesis of the actual culture. The male roles involved manly strength, leadership, and other masculine characteristics; the female roles were the opposite of the male roles. In sociological studies, the roles in actual life tend to be equal. The true economic picture of the Philippines is opposite to the Utopian one presented in the advertisements. A striking feature of the advertising was the over-representation of Caucasions. Marquez concluded after studying the advertisements, that the cultural content of Philippine advertising did not reflect the indigenous culture of the Philippines.

Hachten (224) analyzed Ghana's press under the National Redemption Council (NRC), which has ruled the West African nation since 1972. He found that a basic authoritarian pattern is present in the press. There is almost complete government control of all mass communication media. The press has little access to governmental news but exhorts the public to support the government and prints no direct criticism of and little dissent to the leadership. Despite the foregoing circumstances, residual liberal and democratic elements still survive in Ghandian journalism. The purposes of the press—as perceived ostensibly by the NRC—include the following: spokesman for NRC, publicizer of great campaigns, spokesman for political ideology, advocate of unity, and legitimizer of the government. The press also provides reading material for the new literates, a limited forum for discussion of public affairs, an agenda of the major issues as seen by the government for the urban elites, and information needed for daily living. The press does not provide an informed report of current public issues for the better educated nor news which is relevant to the readers' lives. The persistent inadequacies of certain public services are seldom referred to in the press.

Nasser (405) surveyed the freedom of the Arab press under Israeli occupation. Because almost all of the Arab states do not have a free press, it was considered remarkable that the one under Israeli occupation was free. Nasser obtained his information from his own experience with the Arab press in Jerusalem at the time of the Six-Day

War of 1967, questionnaires and personal interviews with Arab editors in the occupied areas, an analysis of several interviews, and translations of editorials. Nasser described briefly the Arabic newspapers that appeared between 1968 and 1973 and concluded that many incidents tended to support the belief that the freedom was more a matter of theory than actuality. Many of the Arab editors maintain that the press freedom serves the Israeli interests more than those of the Arabs because a free press prevents the establishment from going underground, serves as an outlet for mass tension, maintains existing conflicts in Arab public opinion, and can be used as a channel of propaganda for Israeli achievements in occupied areas. Arab editors also feel that the major role of the press in the occupied areas is to keep the Arabs well informed and enlightened and to keep their morale high.

Vilanilam (562) analyzed issues from 4 newspapers published in India to ascertain if there were significant differences between independent and congolmerate-controlled newspapers in the quantities of developmental, governmental, and political news found in each kind of paper. Developmental journalism is journalism which is conceived as journalism relating to the projects and programs in economically backward countries that aim to provide certain minimum living standards to the people. In this study, developmental news was defined as news relating to the primary, secondary, and tertiary needs of a developing country. Both the number of items and column inches of news were used as the units of measurement. It was found that all 4 newspapers—regardless of ownership—used more space for governmental and political news and much less for developmental news. The independent newspapers devoted more space to developmental news than did the papers of the conglomerates, and the latter gave more space to governmental news than the independents did. Vital developmental problems, such as health and housing, were omitted from all 4 newspapers. Instead they focused attention upon parliament and state legislature proceedings and similar topics.

III-13 Reaction to the press

Sohn (517) studied how newspaper readers relate 3 typical crime story elements to belief in the guilt or innocence of the accused. The subjects sorted stories into 9 separate piles on a continuum of most guilty to most innocent. The stories manipulated 3 independent variables, which were the kind of crime (felony or misdemeanor), name of accused (common or uncommon), and penalty for conviction (high or low). All stories stated that an accused had been charged with a crime that carried a penalty upon conviction. Factor analysis was used to reduce the number of variables to those which appeared most responsible for the sorting behavior. This analysis clustered together the subjects who sorted the stories in essentially the same manner. Multiple regression analysis was also used to determine if the crime story element would account for significant proportion of variance in the factor pattern for each type. One variable, the kind of crime (felonies), seemed to affect the opinions of certain subjects concerning the innocence or guilt of those accused in news stories.

The types of errors found in scientific news stories were analyzed by means of factor analysis by Ryan (483). Specifically, he tested an assumption made in similar earlier studies that the kinds of errors could be classified into 2 categories. Data were obtained from questionnaires in which scientists were asked to indicate which of 42 kinds of errors they thought had occurred in the story they received with the questionnaire. Three factors instead of 2 accounted for 31.6 per cent of the total variance. Factors 1 and 2 were considered to be interpretable subjective errors; and Factor 3, objective errors. Factor 1 included errors relating to overemphasis, overstatement, and exaggeration. Factor 2 related to errors of understatement and underemphasis. The last factor referred to timing or typographical errors. Other kinds of errors reported had factor loadings too low for interpretation.

In a similar study of the accuracy of science reporting in daily newspapers, Pulford (446) aimed to determine if the number of errors reported by the originators of the stories was a function of the length of the error type list in the questionnaire and to study the seriousness of the errors. Rating scales for the seriousness of errors were included on 5 areas of reporting (errors in whole story, omissions, misplaced emphasis, fact errors, quote errors) and for the story as a whole. This study was, in part, a replication of another study; the 42 possible error types were reduced to 11. Respondents were asked to rate the study for accuracy and for seriousness of errors. They reported an average of 2.16 kinds of errors per story; 29.4 per cent had no errors, and the remainder had from 1 to 5 errors. This study rated the types of errors in the science articles closer to those in general news stories than did the earlier study. The type of error reported the most was the misleading headline. Only a small percentage considered the errors to be serious.

Schweitzer and Goldman (493) studied the contents of 2 newspapers during a period of competition and compared their coverage with the later coverage of the surviving newspaper after the demise of one and the reactions of the readers to the contents of the papers. The news content of the papers was coded into 23 separate categories, 7 of which were considered to be immediate award items. No support was found for the hypotheses that after competition ceased there would be a decrease in the amount of local news published and an increase in sensational content. A telephone survey provided the data for reader reaction to the contents of the newspaper. The readers of both papers tended to perceive quality differences in the newspapers only in immediate-rewards categories; otherwise there was no difference in the ways in which they compared the 2 newspapers in other categories. As hypothesized, they perceived no difference in the quantity of local news available in the remaining newspaper after publication had ceased for the other one. The investigators concluded that the findings of their study confirmed those of previous studies in that the content of competitive papers is much the same. In addition, the results show that for the intended readers the presence or absence of daily newspaper competition does not seem to make a difference.

III-14 Uses and effects of reading

A report by Della Bitta, Johnson, and Loudon (122) reviewed the value and use of the education publications of the New England Marine Resources Information Program. By means of request forms, a census analysis was made of all requesters during the 18 months prior to the study. They were classified by user category (business, personal, etc.) and by geographic area. A mail survey questionnaire was sent to the requesters to evaluate 20 publications and to determine the values and uses made of the information found in the publications. The most important source of information concerning the availability of publications is the organization newsletter. Approximately 85 per cent indicated that they read most or all of the requested publications. More than 70 per cent indicated that they were unfamiliar with most of the information in the publications. Personal use was the most frequently mentioned application of the information found in the publications. Other uses were business planning or operations, educating others, scientific research, and government planning or operations. Nearly 60 per cent reported future plans for using the information. More than 9 out of 10 readers reported that the publications had increased their knowledge; approximately 8 out of 10 respondents indicated an increased interest in the subject matter in the publications.

The purpose of the study by Kavanagh and Beal (285) was to determine the characteristics of Action Line columns which are related to reader usuage. Data were obtained in a larger study through a questionnaire sent to daily newspaper editors. The total sample was divided into 2 subsamples: newspapers with telephone recorders and those without recorders. Those with recorders had much larger mean query loads per week (670) than the non-recorder papers (122). Both groups of newspapers that published a larger percentage of problem-solving items reported higher query loads. The practice of naming the company or agency involved in the readers' complaints was not found to be related to differences in the amount of the readers' use of the columns. Both costs and query load were related to circulation size. When circulation size was held constant for both groups of newspapers, the weekly cost by itself had little impact on reader response. The relationship between the per cent of success of published problem-solving items and query load was supported in the 2 samples and was not influenced by circulation size.

Baker and Walter (27) questioned whether the limited knowledge citizens have of their state legislatures might be due to inadequate press coverage. They analyzed the content of 6 daily newspapers in Wyoming from December, 1972, to March, 1973. They conducted a telephone poll of residents in the state to ascertain if the press coverage paralleled public interest. The subjects stated the 2 issues they thought were most important. A survey of the legislators was made to compare their perception with that of the press concerning the importance of the issues. Baker and Walter found that ample coverage was made of the work of the state legislature in that almost every issue discussed during the session received at least some mention in the press. Altogether, 1,591 stories dealing with some aspect of the legislature appeared in the Wyoming dailies. Although 12 issues accounted for approximately 1/2 of the press coverage of the legislature, considerable difference was found in the emphasis each paper placed upon the issues. The investigators concluded that the press focused, for the most part, on the issues the legislators regarded as most important.

Donohue, Tichenor, and Olien (135) based their study of the use of newspapers and gaps in knowledge upon data from several studies conducted as a part of long-term research on mass communication. The findings resulted from personal interviews conducted since 1969 in 16 different Minnesota communities varying in population size. In 11 communities, the interviews centered around issues with environmental or ecological implications; in 4 communities the issue was political regionalization. The issues received mass media publicity and involved social conflict at different levels. Although the topics varied, each issue had direct implications for at least one community. Mass media coverage was determined by a newspaper coverage index which included the total of all articles appearing in the papers during a 6-month period and by the proportion of the number of articles in a given newspaper and the number of subjects reading them. The investigators concluded that knowledge about an issue is more likely to become evenly distributed across educational status levels when the issue aroused general concern for the community as a whole and when the issue developed in a climate of social conflict. The equalization of knowledge about an issue is more likely to occur in a small homogeneous community than in a large, pluralistic one. Knowledge gaps on specific issues may tend to decline as public attention wanes.

The extent of the publication of congressional news releases in weekly newspapers in a congressional district during a 2-week period was analyzed by Polk, Eddy, and Andre (441). A complete file of releases was obtained from the offices of the senators and of the representative responsible to the district to be compared with the coverage in the newspapers. The analysis included an examination of subject matter, placement, length, and copy editing. The results were categorized under the headings of columns; visits and hard news; and news of national, state, and local orientation. The potential audience that could be reached was also noted. Of the 50 newspapers, 33 printed no releases; the remainder printed 1 or more during the period studied, and 8 published 30 per cent of the releases. Thirty-two releases were sent by the members of Congress. Each legislator theoretically reached between 1.7 per cent and 15.22 per cent of the possible 293,000 families in the district. The investigators concluded that the legislators were minimally successful in reaching their constituents through weekly newspapers and that editors did not passively receive these news releases.

The feasibility of standardized advertising across different countries was tested by Green, Cunningham, and Cunningham (210). Groups of consumers in the United States, France, India, and Brazil completed a survey questionnaire in their home country and in their native language for the purpose of rating attributes used in advertising on a scale which ranged from "unimportant" to "extremely important." The importance of each of the attributes was applied to 2 products—soft drinks and toothpaste. The results indicated both a number of differences and similarities in attribute importance structures in the United States sample and the other 3 groups. The investigators concluded that the results seemed to contradict the idea that international advertising should be standardized: although the basic product may serve essentially the same need in each country, several cultural and environmental factors influence the characteristics of the product that people value in deciding to purchase.

The influence of newspaper advertising upon middleclass and lower-class purchasers of food items was explored by Peretti and Lucas (435). Class status was determined by means of the Index of Status Characteristics, which uses occupation, source of income, dwelling area, and house type. Advertising materials included a list of 28 sales items. Clerks at the check-out counters noted the number of advertised sales items which were purchased and determined if the customers had read about these items in the newspaper. The responses were tallied for each customer for 1 full day. Peretti and Lucas concluded that advertising tended to have a greater effect on customers from the lower class than from the middleclass. Reading the newspaper seemed to increase the purchase of advertised items.

The purpose of the study by Tan (536) was to investigate message derogation, attitude change, and displacement of the source's position as coping methods and the manner in which these mechanisms are affected by source credibility and attitude intensity. A preliminary investigation established a public issue (capital punishment) that provided an even distribution of pro and con attitudes; it identified a credible source (*Yale Law Review*) and a non-credible source (a well-known convicted murderer), and gained initial attitudinal ratings. Three weeks later the subjects read an identical message arguing for the abolition of capital punishment, one group receiving it from the credible source and the other, from the non-credible source. The dependent variables were the number of inconsistencies noted by subjects, their rating of the source's position on the issues, and the difference between their before- and after-attitude scores. The independent variables were source credibility (obtained after the second questionnaire), initial attitude position of the subjects, and the intensity of the initial attitudes. The credible source was more effective in changing attitudes of those who intially disagreed with the message than was the non-credible source. There was slightly more attitude change in the credible-disagree condition than in the credible-strongly disagree condition, but there was no difference between these 2 groups within the non-credible condition. The subjects in the credible, discrepant condition who disagreed strongly recorded more errors within the reading selection than did the subjects who disagreed less; there was no difference within the non-credible conditions. Subjects who disagreed with a credible source tried to minimize the degree of disagreement by perceiving a less extreme attitude in the message; message displacement did not occur under non-credible conditions.

Gormley (207) tested the agenda-setting effects of the press at the state level. Specifically, he wished to ascertain whether the political elites were influenced by a rank-ordering of a small number of broad issue areas such as social welfare or a large number of specific issues, such as capital punishment. Through a content analysis of 5 North Carolina newspapers, Gormley identified 25 salient state issues. Questionnaires were mailed to each of North Carolina's 50 state senators who were asked to rate the importance of these 25 issues on a 10-point scale. Twenty-four of these issues were collapsed into 7 issue areas, each consisting of 3 or 4 specific issues. Rank orders of issues emphasized in the newspapers and of the importance rating of these issues were obtained. Substantial agreement between the newspapers and the opinions of the senators resulted on the relative importance of the 7 issue areas, but there was considerable disagreement between them on the relative importance jof the 25 specific issues. Newspapers emphasized 6 issues more than the senators did; the 6 are similar in that they involved an emotional conflict between 2 clearly distinguishable sides, such as those purporting tax reform proposals. The 6 issues which the senators ranked much higher than the newspapers did were issues that the senate acted upon in 1973. The senators tended to stress legislative accomplishments more than the newspapers did.

The influence of newspaper editorial endorsements on the voting in a mayorial race involving 33 candidates was investigated by Hain (225). Two elections were needed since no candidate received 40 per cent of the votes in the first election. The data were collected through telephone interviews at 2 different times: during the week preceding and 3 weeks after the first election. Of the 611 who were interviewed the first time, 67 per cent were reached for re-interviewing. Two newspapers endorsed a former state senator for the mayorial office, but the endorsement appeared in the paper with the larger circulation after 93 per cent of the people had been interviewed. Hain explained that the data presented an approximation of pre-editorial and post editorial influence. The endorsements boosted substantially this candidate's share of the vote, but the pre-endorsement support had been so weak that the editorials were not enough to put him into the run-off election. The results of the first interview showed that only 1.5 per cent of the subjects were firmly committed to the newspapers' choice. Over 1/2 of those interviewed were undecided. Fifty-five per cent of the subjects were aware of the newspaper endorsements when they voted; of these subjects, 81 per cent maintained that the editorial had not influenced their vote. Hain found that an impact of editorial endorsement was made primarily upon those who were undecided. In this case, the endorsements accounted for approximately 5 to 7 per cent of the vote.

III-15 Research techniques

The Professional Standards Committee of the National Conference of Editorial Writers conducted a mail survey of 317 general circulation daily newspapers subscribing to William Buckley's syndicated column, according to Cranberg (113). They were asked if they printed a column critical of an archbishop's support for the boycott of a manufacturing company and if they printed the archbishop's response. The purposes of the study were to determine at what point a researcher conducting a mail survey should decide he has an adequate number of responses and to ascertain the performance of the press on issues of fairness (in this case, the willingness to grant space for a reply by one being attacked in the newspaper). The first mailing yielded a 63 per cent response and the second mailing, an additional 19 per cent. The remaining 58 papers were contacted by telephone; information was obtained from all but 16 of the papers. The decision to seek responses from more than the 63 per cent who answered the original mailing had a substantial impact upon the outcome of the survey. The increased number responding nearly doubled the percentage of papers failing to print the archbishop's reply.

A procedure for minimizing non-response error in surveys was tested by Filion (173), who examined responses to the Canada Migratory Game Bird Harvest Survey by using linear regression over cumulative response waves. The subjects were hunting permit purchasers in Ontario who were asked for estimates for the annual kill of game birds and the number of days of recreation provided. In 1971-1972 a survey consisting of 3 mailing waves (an initial mailing and 2 follow-ups) was undertaken to examine the non-responses in the initial mailing who responded subsequently to either follow-up. The latter tended to have a significantly lower level of involvement in the topic being investigated, were younger, and lived more often in rural areas than did the first responders to the survey. Successive waves of responses, therefore, increased the representativeness of potential hunters in the sample. The speed with which questionnaires were returned increased significantly in follow-up mailings. Another trend observed was the tendency for surveys with a low response rate to underestimate the number of deceased persons or unclaimed letters. Filion concluded that error due to non-response in questionnaire surveys can be minimized by following up nonrespondents and by applying a linear regression to the trend observed between cumulated observations for estimating parameter values of the population.

Two approaches to automated newspaper indexing were researched by Pasqua, Rayfield, and Showalter (431). Twenty-nine newspaper articles were computer stored and used as the data base for the 2 approaches. The data retrieved from this base were frequency and capitalization counts of all words (except that uncapitalized words of fewer than 4 letters were omitted). The 2 approaches labeled *Consecutive Text* and *Word Weighting* are based on the premise that minimum human involvement is required; they are newspaper oriented, and they provide a number of clues for identifying articles which a reporter or researcher may need. They differ in how story content is selected for storage and how data are retrieved. The Consecutive Text approach stores byline, dateline, key word, and lead paragraph unit for each article. The key word is the capitalized one most frequently occurring in the story. The Word Weighting approach relies upon headline, byline, corporate news source, dateline, word position, capitalization, and repetition as quantifiable indexing stimuli. The latter is characterized as being quite flexible. Detailed directions for each approach were included in the report. The investigators warned that neither method is a panacea for newspaper indexing and that each proved to be about 80 per cent correct.

Nielsen and Nielsen (415) developed their model for ascertaining attitudes of adults toward the media by basing it upon earlier ones but by adding the concept of social sanctions. When they tried it out, the subjects were asked to indicate the degree that they were likely to support, buy, watch, and/or read the attitude objects and to respond to questions concerned with importance of the value or belief as a source of satisfaction to the person, the extent to which the object would lead to the attainment of the value, and the level of social sanction needed for the accomplishment of the foregoing. The values-beliefs included in this study were self assertion, audacity, intellectual interests, motivation, applied interests, orderliness, submissiveness, closeness, sensuousness, friendliness, expressiveness, egoism, and fatalism. The model was tested by relating the intentions of people to buy or read the attitude objects (magazines, television programs, performing arts) with their attitude scores. The model developed by the Nielsens had a higher relationship with people's intentions toward the media considered than did earlier ones.

IV. *Physiology and psychology of reading*

IV-1 Physiology of reading

Bedwell (42) studied visual problems in British children in their junior year. A total of 33 subjects were examined, 8 of whom were receiving remedial reading instruction and another 3 of whom were considered poor in reading. Studies were made of the children's posture, binocular vision, laterality, and sense of order. Additionally, light threshold contrasts were assessed with the Visual Field Analyser. Finally, eye movements and EEG readings were investigated during oral and silent reading. Results are reported in the form of 9 case histories of children in the study.

Yamadori and Ikumura (593) reported a case study of a stroke victim with conduction or central aphasia. Data on the patient's oral language and oral reading were collected. Five sets of stimulus words were prepared, with each set consisting of 20 words of the same number of syllables. The words were pronounced to the patient in random order under no time constraints. As the number of syllables in a word increased, the patient's performance decreased, although she was often correct on the first syllable. When asked to name line drawn pictures, the same pattern of difficulty occurred. Pictorial cueing thus appeared to be of no help. The patient was then tested on her ability to read orally in Kanji and Kana. First 4 sets of single Kanji (ideograms) characters, each set composed of 10 Kanji, were presented. The reading involved from 1 to 4 syllables. The patient recognized all of the presented Kanji, but her reading ability deteriorated as the number of syllables exceeded 3. She was then given 5 sets of 10 Kana-transcribed standard words, each set being composed of words with the same number of Kana. Although the patient's performance in Kana exceeded that in Kanji, she still showed considerable difficulty as the number of Kana (phonograms) in a word increased. When asked to write dictated words, the patient was correct in transcribing 3 syllable words 17 out of 20 times when Kanji was used, but correct only 6 times when Kana was used. With 4 syllable words, she was correct in 8 with Kanji, but in only 3 with Kana. Of the total 55 wrongly transcribed words, all 207 Kana-produced were graphically correct. Thus she showed superior written transcription of ideographic symbols but superior oral reading of the phonogramonic symbols. The authors hypothesize that the defect lies in the sphere of acoustic word image and not in the sphere of concept.

Frank and Levinson (186) reported preliminary findings on a continuing dyslexic research project in which over 1,000 children have been neuropsychiatrically examined and generally diagnosed as having specific, primary, or developmental dyslexia. The authors report that their investigations of dyslexic children revealed an underlying cerebellar-vestibular dysfunction, positive electronystagmograms, and deficient ocular-motor fixation and scanning ability. The authors distinguish dyslexia as a disease from dyslexia as a symptom involving a decreased reading score.

McGuigan and Winstead (375) sought to determine the relationship between electromygraphic (EMG) measures of covert oral response patterns and class of linguistic input. Subjects were 12 right-handed males and females, ages 11 to 20. Electrodes were attached to the upper lip and the lower lip, on the left and right dorsal forearms, and on the right lower leg of subjects; and, after a stable baseline was achieved, they read silently from prose selections and were then given a comprehension test. Two selections of about 170 words were read. One consisted primarily of bilabial prose intended to accentuate covert lip behavior; the other emphasized lingual-alveolars designed to heighten tongue activity. A memorization task was administered after silent reading and consisted of slides of bilabial and lingual-alveolar words which were monosyllabic, concrete, and matched for syllable length and frequency of occurrence on the Thorndike-Lorge list. Covert lip EMGs were especially prominent only during bilabial tasks, while cover tongue EMGs were relatively prominent only for the lingual-alveolar tasks. Preferred arm EMGs were heightened during both kinds of tasks, but left arm EMGs and leg EMGs were not.

Rie, Rie, Stewart, and Ambuel (464) reported a replication study of the effects of Ritalin on scholastic achievement. A double-blind, counter-balanced design was used for approximately 15 weeks for each of 2 conditions—active drug and placebo. None of 15 subjects received active drug during the initial 15-week period, and they received placebo in the subsequent 15 weeks; 9 other children received the treatments in reverse order. Criteria for inclusion of subjects included a 6-month deficit in reading; an IQ of 85 or above; enrollment in the primary grades; absence of physical handicap, of severe emotional disturbance, and of known brain damage; and no prior trials on medication because of underachievement or behavioral problems. A number of medical tests were given. In addition, the following were administered: WISC, classroom sociogram, *Iowa Test of Basic Skills, Illinois Test of Psycholinguistic Abilities* (4 subtests for auditory functioning), *Bender Visual-Motor Gestalt Test, Thematic Apperception Test*, a Behavior

Rating Scale completed independently by parent and teacher, and an Organicity Psychogenicity Scale completed by a clinical child psychologist. Analyses of covariance were used to analyze data. Teachers perceived significant behavior improvement in both groups initially, regardless of treatment. No drug effect was observed on measures of reading, math, spelling, and word analysis on the Iowa. The vocabulary subtest on the Iowa was significantly affected by the drug treatment.

IV-2 Sex differences

Lawson (332) compared the relative effectiveness of boys and girls on Piagetian tasks. A total of 62 high school subjects performed 2 manipulative tasks: Bending Rods in which the subjects were asked to identify variables and demonstrate proof of the effect of each variable on the amount of bending of the rods; and Equilibrium in the Balance where subjects' ability to balance various combinations of weights at various locations along the beam is tested. Additionally, subjects were given a verbal problems test, which measured their ability to solve problems involving proportionality, propositional logic, and combinatorial analysis. Finally, additional measures of conservation of weight and volume dispalcement were administered. Performance on the tasks was compared with the *Mann Whitney U* test. For all measures, the males' mean level was higher than that of females. Differences were significant with manipulative tasks ($p < .02$) and the propositional logic subsection of the verbal problem solving test ($p < .10$). Further factor analyses were conducted on all tasks. One factor accounted for nearly half of the variance in scores, with all 5 measures loading substantially on this factor. When factor analyses were conducted for males alone, the findings were nearly identical. However, females' scores loaded substantially on 2 factors, together accounting for nearly 70 per cent of the total score variance.

McTeer, Blanton, and Lee (380) examined the relationship among reported interest in academic areas and variables of intelligence, reading ability, grade point average, educational level of parents, and sex of high school students. Using Remmers' *Scale to Measure Attitude Toward Any School Subject*, subjects were divided into 6 groups of 30 each on the basis of high or low attitudes toward social studies, science, math, and English. Specifically, 3 group pairs each contained subjects with high or low interest in social studies as well as opposite interest patterns in other academic areas. Data analyses were conducted using *t* tests. Results indicated few significant differences on the basis of any of the variables other than sex. High school boys tended to express more interest in social studies than in English, while girls tended to have more interest in English. Boys also tended to have more interest in science than in social studies, while the opposite was true of girls. Additional findings are reported.

IV-3 Intellectual abilities and reading

Kellaghan (287) investigated the question of whether intelligence causes achievement or achievement causes intelligence in a sample of disadvantaged inner-city children. The *Stanford-Binet Intelligence Scale* and the *Preschool Inventory* were administered to subjects attending a preschool at the age of 3, then again at the age of 5. All intercorrelations between intelligence and achievement on first and second testings were significant and positive. Differences in cross-lagged correlations were not significant. Results tended to support the hypothesis that achievement causes intelligence for disadvantaged children.

Four predictors of observed reading achievement were compared by Dore-Boyce, Misner, and McGuire (136) in a study involving 375 fourth and 358 fifth graders as subjects. The contributions of sex, grades repeated, and levels of intelligence also were considered to ascertain whether predictions could be increased by altering such variables. All subjects were given the *Otis-Lennon Mental Ability Test* during the fall of either 1970 or 1971. The *SRA Achievement Series* was administered in March, 1972; and the total Reading score was used as the measure of observed reading. The students' MA's and IQ's were used to compute reading expectancy estimates based on the Bond, Harris 1960, Harris 1970, and Horn-L.A.Formulas. Pearson Product-Moment coefficients of correlation were calculated between the 4 reading expectancies and the observed reading grades for the combined fourth and fifth grade populations. Two step-wise regression analyses were performed, using the data from all subjects. Considered in the first analysis were mental age, sex, and chronological age. The second analysis eliminated subjects who were held back in school so that the grade variable was treated as years in school. In part, results of coefficients of correlation data disclosed that the 1960 Harris approach was found to be the best predictor of actual reading grade; the formula of reading expectancy equalled MA minus a constant of 5 years. However, no formula was judged as adequate for predicting reading achievement of students who ranked in the low IQ range between 70 and 89. According to data based on stepwise regression analysis, IQ or MA accounted for almost all the systematic variance (R=.696 to .721). CA accounted for a small but significant part of the variance when MA was included, but grade as a variable made no real contribution in increasing the mulitple *R*.

Young and Cormack (596) examined the relationship among subtests from the *Weschsler Intelligence Scale for Children* and the *Illinois Test of Psycholinguistic Abilities*. Both tests were administered to a sample of emotionally disturbed children. A principal component factor analysis was used to assess relationships between the 2 tests. The analysis yielded loadings on 2 factors. Factor I was comprised primarily of ITPA Auditory subtests and WISC Verbal subtests. Factor II was comprised primarily of the ITPA Visual subtests and WISC Performance subtests. The 2 factors accounted for 23.3 and 22.3 per cent of the matrix variance, respectively. Next, a stepwise multiple regression analysis was conducted to determine which ITPA subtests correlated most highly with WISC Full Scale, Verbal, and Performance IQ. In each instance, 6 ITPA subtests correlated significantly (from .64 to .70 group correlations) with each measure of intelligence. The following 4 ITPA subtests correlated significantly with WISC Full Scale, Verbal, and Performance IQ: Visual Association, Manual Expression, Auditory Sequential Memory, and Visual Sequential Memory (all expressed in scaled scores).

Sewell and Severson (496) investigated the relationship between school achievement and a number of variables known to be associated with learning ability. Subjects were black first graders from low SES backgrounds and ranged in age from 5 years 10 months to 7 years 5 months. Learning potential was assessed with *Raven's Coloured Progressive Matrices* followed by training in attentional abilities and reflective thinking. Second, a paired-associate task of 3 lists of 25 noun-picture pairs was given subjects in 3 conditions: normal side-by-side presentation with instructions to make a sentence out of the pair of objects, and with the examiner reading a sentence that linked the pair. Finally, subjects learned new words under different conditions of reinforcement, this being an index of the usefulness of diagnostic teaching. These conditions included feedback of correctness of response, social praise, and tangible reinforcement. Additionally, 7 subtests of the WISC were administered to all subjects as well as the Word Reading and Arithmetic subtests of the *Stanford Achievement Test*, the latter being the achievement criterion. All achievement, WISC, and learning ability variables were subsequently intercorrelated. IQ was related to all conditions of diagnostic teaching, paired-associate learning, and the *Raven* test. The 3 conditions of diagnostic teaching were related but showed considerable independence of one another. Intelligence was clearly related to achievement ($p < .001$). Additional results and factor analyses of the data are presented.

The purpose of the report by Das and Molloy (120) was to compare the patterns of factor loading for a battery of cognitive tests in 2 age groups, 6 and 9. IQ for grade 4 pupils was assessed by the *Lorge-Thorndike Verbal IQ Test*. Grade 1 boys were selected on the basis of *Metropolitan Readiness Test* scores, with the requirement that a child's score not be above the fiftieth percentile. Tests measuring simultaneous and successive processing were *Raven's Coloured Progressive Matrices*, Figure Copying, Memory for Designs, Auditory short-term memory, Visual short-term memory, Cross-modal coding, Word reading and Color naming, Digit span—forward and backward on the WISC, Bridge task, and the *Peabody Picture Vocabulary Test*. Test scores were intercorrelated and the resulting matrix subjected to a principal component analysis. A varimax rotation was then performed on the principal axis loadings. Factor structures identified were essentially similar for both age groups; the factors of Successive, Simultaneous, and Speed emerged. The analysis suggested that the subjects in both age groups consistently resorted to similar processing strategies on the cognitive tasks employed. Some disparities were noted, however. The authors then attempted to expand the test battery without changing the factor structure by adding the Digit Span and Performance IQ of the Lorge-Thorndike. For the grade 4 sample, reading achievement test scores were added to the other tests. An analysis was then made of the 16 scores given to the fourth grade pupils. This time 5 factors were revealed—the 3 found earlier plus Spatial Imagery and Socioeconomic-Status-Cultural.

Peel (433) investigated the cognitive development and cognitive style of British students. An experimental instrument involving sentence reading was constructed. Totally, 21 key concept terms were chosen and 4 sentences were constructed dealing with each term. The 4 sentences were constructed so as to contain the key term as an abstraction, generalization, particularization, or partial meaningful association with other terms in the sentence. Subjects were presented the 21 groups of sentences and asked to choose from each group the "one out of the four you prefer as having the most significance for you." Comparing performance of the present subjects on the test to that of subjects in previous studies, an upward trend in abstraction and generalization was noted, these increasing with age. Also, as age decreased, particularization appeared also to decrease. The author provides reliability and validity information for the experimental instrument.

Raven, Hannah, and Doran (456) proposed to study the relationships between Piaget's logical operations and achievement in physical science and biological science. In addition, they studied the relationships among science achievement, reading comprehension, and critical reasoning. Science achievement was assessed by the Earth Science Curriculum Project *Test of Science Knowledge* (TOSK) and the Biological Science Curriculum *Comprehensive Final Examination* (CFE). The *Iowa Silent Reading Test*, Advanced Form Am, (ISRT) was used to assess reading skills. Critical reasoning ability was evaluated by the *Paulus Conditional Reasoning Test* (PCRT) and the *Paulus-Roberge Class Reasoning Test* (PRCRT). Logical thinking was assessed by *Raven's Test of Logical Operations* (RTLO). Subjects were 123 black freshmen enrolled in a required introductory science course. The ISRT scores correlated .433 with TOSK scores and .406 with RTLO scores. Other coefficients for the ISRT were below .25. Multiple correlation coefficients between the 7 RTLO subtests and the other variables were determined. The 7 RTLO subtests predicted about 1/4 of the variance on the IRST.

The purpose of the article by Lawson, Nordland, and Kahle (333) was to examine the relationship among scores on 10 Piagetian tasks used to assess levels of concrete and formal reasoning and problem solving abilities and scores on the sequential test of Educational Progress—Reading Form 3A (STEP). The tasks were selected to cover the following levels of thinking: Preoperational-I, Early concrete operational-IIA, Concrete operational-IIB, Early formal operational-IIIA, and Formal operation-IIIB. Subjects who scored higher on the Piagetian tasks also scored higher on the reading test. A Pearson product-moment correlation coefficient of .70 was obtained between the 2 variables. Further testing indicated that the relationship was linear. More formal or difficult tasks correlated more highly with the STEP score than did the easier, more concrete tasks; but all coefficients of correlation were positive and significant.

Young (595) derived a formula for determining reading potential and compared it against 2 common formulas, the Mental Grade Formula and the Years in School Formula. The Young Formula attempts to account for such variables as the effect of retention of a student, the distorted predictions that result when IQ's deviate 2 or more standard deviations from the norm, and the human error factor in computation. The author's formula is calculated by multiplying the student's present grade by his individual IQ score, written as a decimal (GR × IQ = Reading Expectancy Level). Because IQ is the common factor in all 3 formulas, Young's comparisons demonstrated the predicted reading potential score for graduated IQ levels from 60 to 170 for hypothetical second and sixth graders who had been socially promoted or retained 1 year.

Smith (512) compared a number of intelligence tests for their ability to yield appropriate reading expectancy data when compared to the Performance Scale of the *Wechsler Intelligence Scale for Children*. The following tests were administered to second, fourth, and sixth graders: *Lorge-Thorndike Nonverbal Intelligence Test*, *Slosson Intelligence Test*, *Peabody Picture Vocabulary Test*, and the *Ammon's Quick Test of Intelligence*. Using a contingency table and a criterion of 67 per cent agreement, tests were compared for the extent to which they classified readers as able, disabled, or probable disabled readers. The *Silent Reading Diagnostic Test* was administered to all subjects for purposes of comparison. Additionally, the Performance Scale of the WISC was administered to the subjects. Results indicated that overall, the AQTI did not classify readers in a fashion similar to the WISC. All tests functioned well in this respect at the second and sixth grade levels, and with male readers. The AQTI was judged inappropriate overall and specifically with fourth graders and girls.

MacGinitie (353) presented preliminary findings of a study into aspects of beginning reading. Teachers' manuals for several different primers and first readers were examined to note the conceptual and reasoning tasks required of children. The logical steps required were then translated into an abstract notation to determine the complexity of the steps and to note if certain logical operations predominated. Also an analogue of the set of grapheme-phoneme correspondences was developed along with lessons paralleling phonics lessons in teachers' manuals. The difficulty of the reasoning required was studied through means of the analogue lessons. The author reports that many logical processes asked of a learner are too difficult for the child to understand. Children were often able to do the analogue lessons more easily than the parallel phonics lessons. Although a few logical paradigms were found representing much of the instruction given, different paradigms were used in different manuals for teaching the same basic processes. Some of the paradigms appeared more difficult than others.

IV-4 Modes of learning

Rudel and Denckla (480) examined the ability of LD and normal children to match spatially arranged patterns of dots as well as sequences of light flashes within the visual mode. LD's were attending a private facility. All subjects found it easiest to match spatial patterns with each other; this task did not differentiate the 2 groups. On tasks requiring subjects to match sequential light flashes to other flashes of light or to a spatial pattern, normals did significantly better than LD's. Only temporal sequencing matching tasks correlated with WISC Full Scale and Performance IQ's. Only temporal spatial matching tasks correlated significantly with reading age. Within the normal group, older subjects performed better on most of the tasks than younger subjects. In the LD group, there were no differences due to age of subject.

Drader (140) investigated the relationship between reading ability and the ability to correctly describe temporally ordered patterns of lights, sounds, and finger taps. Subjects defined as good and poor readers on the basis of reading scores from the *Gates-MacGinitie Reading Test* were presented various patterns by visual, auditory, and tactual modes. Performance on these tasks were entered into an ANCOVA in order to partial out the effects of intelligence. Results of the analyses indicated no reliable main effects for reading ability or modality, nor was the interaction between reading ability and modality significant. The author discusses the results, minimizing the importance of memory and verbal labeling abilities to reading.

Swenson and Fry (533) studied first graders' ability to identify trigrams under different conditions of alternative mode presentation. All subjects were assessed for reading achievement by the *Gates-MacGinitie Reading Test*. Subjects were presented 10 trigrams and asked to choose from several alternatives the one that matched the stimulus trigram. Thus, the stimulus and alternative trigrams were presented under 4 conditions: visual-visual, auditory-auditory, visual-auditory, and auditory-visual. A 2-factor repeated measures ANOVA was used to analyze correct responses. No main effects or interactions were uncovered for sex. Performance was significantly better in the visual-visual task condition than in the other 3 task conditions. There was a significant and positive relationship between performance in all task conditions and reading achievement.

The correlates of reading ability at grades 1, 2, and 3 were studied by Hartlage (241) to determine whether there was some discernible pattern of evolution of different skills involved in reading. Reading levels of the 130 subjects were assessed by the *Wide Range Achievement Test* (WRAT) and by teachers' ratings of reading skills. Components of reading ability were measured with subtests of a predictive screening scale developed earlier and included Visual Sequencing, Auditory Sequencing, Visual-motor Integration, Auditory/Space, and Visual and Auditory/Space. Visual-motor

Integration was not significantly correlated with reading at any age. Boys and girls did not differ significantly on any of the 5 measures except Auditory Sequencing, on which girls were significantly better at age 7. Visual Sequencing was significantly correlated with reading ability at all levels. Auditory Sequencing was significantly correlated with WRAT scores for younger but not for older children. Visual and Auditory/Space scores were significantly correlated with WRAT scores at all levels, but the magnitude of the coefficients diminished with increasing age. Auditory/Space showed .380 and .317 correlation coefficients with WRAT scores at ages 6 and 7 ($p<.05$). WRAT scores and teachers' ratings correlated .86 at age 6, .88 at age 7, and .78 at age 8.

In his study, Walker (569) contrasted the effectiveness of reading and listening processes in eleventh grade students. Three independent samples of 48 students were randomly divided into 2 treatment groups each. In the listening treatment, a videotaped discussion was presented. In the reading treatment, a written version of the same discussion was presented. Both treatment groups then wrote down as much as they could recall of the content. The written responses were then analyzed according to 4 categories related to the accuracy of the recalled ideas to the content. The recall ideas of readers relative to those of listeners were characterized by: 1) more recalled ideas, 2) more recalled ideas displaying an appropriate relationship through association with other relevant original ideas, 3) more non-distorted recall ideas, and 4) a lower proportion of ideas not identifiable as being from the original text.

Farnham-Diggory and Gregg (166) gave 24 fifth graders memory span and memory scanning tests in both auditory and visual modalities. Pupils were from a low socioeconomic area. Half were identified by teachers as average or above average readers and half as poor readers without any other apparent form of retardation. Children were tested individually on 20 memory span trials and 80 memory scanning trials. They were then asked to construct patterns out of the same letters used in the span and scan procedures. Pattern-construction rules were explained by each subject. In addition, each child read 24 words selected from normed lists. The word reading was scored for whole word errors; integration errors; blanks, where perhaps only the first syllable was given; and mispronunciations. For auditory memory span, children had to recall a series of lettersets presented by tape; for visual memory, the letter sets were presented visually at the same pace as the auditory materials and then recalled. Only 4 letters were used throughout. In the memory scanning trials, the same 4 letters were used and children responded to which came first, last, or before in both a visual and auditory mode. They were also asked how many of a given letter had been presented. Short term memory function deteriorated over time in the poor reading group. When modality was switched, good readers showed a release from proactive inhibition, but poor readers did not. For good readers, memory scanning occurred at about the same speed in both modalities; among poor readers, auditory speed gradually lagged relative to visual rates. Poor readers tended to lack the concept of a letter pattern more than good readers. Stepwise regressions showed that different patterns of variables were associated with different types of reading errors.

The relative value of reading and listening as modes of learning was compared by Breiter (59) on the comprehension of social studies materials by 570 sixth graders from various Minnesota schools. The 28 participating classes were randomly assigned either to an experimental listing group or to a reading group as controls. In the experiment, 2 commercial supplementary social studies unitexts were used, each dealing with a single topic and involving investigator-written materials which in total formed 2 units of experimental materials. These materials were used under treatment conditions 1 hour per day for 10 school days. Five periods were used to read or listen to the text of 1 unit and complete question sets which matched each lesson in the unit. Another 5 periods were similarly used for the second unit. Each unit of study was preceded and concluded respectively by a pretest and a post test—both author-constructed—as measures of comprehension. An analysis of covariance was used to treat the data. Findings revealed that the majority of comparisons showed no significant differences in the effectiveness of reading and listening as modes of learning. Significant differences were found for girls and for children of above-average intelligence who showed that they learned more by reading than by listening.

Fronk (189) compared reading and listening modes in different kinds of instructional materials for their effect on learning in college students. Students were divided into low, medium, and high reading groups on the basis of reading scores from the comprehension section of the advanced form of the *California Reading Test*. Each of these groups, then, was divided into 2 sections; each section studied 2 types of instructional materials (manipulative or non-manipulative) from reading or from listening. A mastery level of achievement defined as a perfect score on the criterion measure was required before each treatment was considered complete. Analyses of variance indicated that the listening mode in the manipulative unit was more efficient for all subjects regardless of reading level. For this type of material, the reading test was not effective in predicting the more efficient learning mode. In the non-manipulative unit, the more efficient mode varied among the subjects in relation to their reading achievement levels. Here, the reading scores were useful in predicting the more efficient mode. These results strongly suggest that one should determine whether teaching materials are manipulative or non-manipulative before making decisions concerning the mode of instruction for subjects.

Levy (338) investigated various formats of presentation and grammatical manipulations with sentences and their effect on subjects' ability to remember sentences. In Experiment 1, 64 sets of 3 sentences each were presented to subjects; immediately following presentation, subjects were asked to indicate if a test sentence matched any of the experimental sentences. Sentences were presented in 4 condtions: visual silent (presented visually and read silently), visual vocalized (presented visually and read aloud), visual suppressed (presented visually while subjects counted), and auditory (presented orally). Results indicated that sentences were better remembered following auditory presentation. Also, suppressing vocal activity by having subjects count during reading resulted in a performance decrement. Subjects in Experiment 2 were presented sentences in the same manner under conditions of auditory and auditory suppressed. Results demonstrated that suppression of vocalization interfered with task performance, but not to the degree exhibited in the visual suppressed condition in Experiment 1. Subjects in Experiment 3 were presented sentences in visual and visual suppressed conditions. Half the subjects were shown unrelated sentences in the manner of Experiments 1 and 2, while the other half were shown sentences that formed a paragraph and were instructed to relate the 3 sentences in order to remember them better. The suppression effects demonstrated in Experiment 1 were repeated in Experiment 3 for thematically related sentences.

The purpose of the research by Neville (408) was to determine any differences in comprehension when the speed of an aural message was varied and combined with reading or was listened to only. The subjects were 118 British middle school children of normal reading ability. They were divided into 2 groups. One group read 3 equivalent form passages of the *Neale Analysis of Reading Ability* while a recording of each passage was played at normal, slow, or rapid speech rate. The other group listened to the same recordings, also at the 3 speeds. Comprehension was assessed following each paragraph. In addition the *GAP Reading Comprehension Test* was administered. On the GAP test, subjects showed average reading ability with no significant sex differences. In the reading group, comprehension decreased as the speed of the aural pacer increased. Performance of girls was poorer than that of boys for the Normal and Slow aural pacers. The rate of presentation did not affect the comprehension of the listening group, however. For this group, too, boys scored better than girls for the Normal and Slow presentations.

IV-5 Experiments in learning

Schumacher, Liebert, and Fass (491) explored the effects of advance organizers and organization of text on recall in college students. Two sets of stimulus materials were used: 1) a "part" set with 6 paragraphs of 598 words, each of which was placed on a separate page; and 2) the same content in the form of 1 running paragraph with transitions placed between the topical breaks and totaling 616 words. In addition, half of the subjects received one or the other sets of stimulus materials accompanied by an advance organizer telling how the passage was organized. Materials were followed by 24-item recall completion test. Analyses were conducted using a 2 × 2 × 6 factorial design. ANOVA's indicated that there was a significant ($p<.05$) main effect in favor of the whole stimulus materials containing transitions. There was also a significant ($p<.05$) interaction between advance organizer and paragraph organization.

A sample of 123 university students was used in an experiment by Wong (590) to assess the effects of advance organizers on short- and long-term retention of an essay. Each of 8 sections of an educational psychology course was randomly assigned to one of 4 treatment conditions to include an advance organizer plus learning group, a learning but no advance organizer group, an advance organizer only group, and no-treatment control group. All sections were taught by the same instructor. Material to be learned was contained in 2 approximately 1,500-word essays which were identical in organizational structure. An organizer sought to explain an idea in terms of principles, organizational structure, and subsuming concepts. For the experiment, the relative position of some psychological and developmental theories were pointed out concerning views of man and were judged as advance organizers. The dependent variable was made up of scores on a 20-item short-answer test on the experimental material at 5 days and 37 days after presentation of the materials. Means and standard deviations were computed for each aggregate group from the resulting data. The experiment was carried out over a period of 40 days from the first presentation of the materials to the final long-term retention test. On 5-day and 37-day retention measures, the advance organizer-only group was significantly better than a no-treatment control. The advance organizer plus learning group was signifcantly better than a learning-only group on the shorter retention period but not on the longer. The advance organizer-only group was the only group not to decline in score over the 32-day interval between measures.

Frase and Schwartz (187) investigated question generation and tutorial grouping as study strategies for improving recall comprehension from prose. Paid high school subjects were assigned to 24 tutorial pairs in which they studied a 1,218-word passage divided into 3 sections. Each pair studied one portion of the text with one or the other subject in the pair acting as questioner; both subjects in each pair studied the last portion of text independently. After study, subjects answered 90 post test items presented via tape recording. A 6 × 3 ANOVA followed by multiple comparison tests was used in data analyses. Of the 341 subject generated questions, 99 per cent required verbatim responses. Mean total recall scores for answering, questioning, and studying conditions were 54.1, 52.4, and 46.8 per cent, respectively ($p < .01$). Answering and questioning conditions differed from studying, but not from each other. Recall on the 2 sets of targeted items (those items generated by subjects that also appeared on the post test) was significantly higher than all other means, which did not differ from each other. Questioners did not score higher on incidental learning than answerers. In Experiment 2, subjects again generated questions but worked independently, and an effort was made to have subjects generate more questions and questions they felt would *not* appear on a post test. Using essentially the same experimental materials, it was found that difficulty of target and non-targeted items did not differ and there were no differences in performance from Experiment 1. The authors conclude that question generation, whether in tutorial setting or as an independent strategy, is effective in increasing recall.

Mayer (367) explored the effect of different types of adjunct questions on the comprehension of 80 college subjects. Preview and review questions were of 3 types: definition, calculation, and model. Two additional conditions were included where subjects received all types of questions or no questions. A set of 8 passages was used as stimulus materials; the first 6 passages and associated questions were used as practice materials. Reading time and question performance were recorded for only the last 2 passages. Analyses of variance indicated a main effect due to question set with subjects who had received model questions and subjects who received all types of questions performing best. Subjects who received no questions demonstrated the lowest performance. There was also a treatment X question type interaction in which subjects performed best on the questions they had seen during the practice session. The effects of different types of questions on the kinds of information acquired from text is discussed.

Watts (576) investigated the facilitative effects of adjunct questions when used with high and low achieving sixth graders. A total of 96 subjects were determined to be either high or low achievers; each of these 2 subgroups was then divided into an experimental and a control condition. Experimental subjects received a passage of around 1,000 words divided into 10 sections, each section followed by a related adjunct question. Questions were of 2 varieties: repetition questions requiring subjects to recognize information drawn from text, and integrative questions that required more than recognition of information. Data analyses were conducted via a $2 \times 2 \times 3 \times 2$ factorial design followed by Newman-Keuls tests. The learning measure was comprised of a 30-item multiple choice post test. Results indicated a significant main effect for achievement in the predicted direction, as well as a significant treatment effect (both $p < .01$). There was also a significant ($p < .01$) achievement X treatment interaction indicating that the significant main effect for treatment was primarily due to differences between the 2 low groups. The author discusses the interaction of adjunct question treatments with personalogical variables.

Friedman and Wilson (188) examined textbook reading patterns and underlining patterns in college students. Subjects in psychology courses were directed to buy a particular text; each text contained 16 chapters and each chapter contained 4 glue seals that, when broken, would indicate reading patterns. Glue seals were placed at the beginning, mid-point, end, and at text summary locations. Subjects were informed that they would receive 4 exams over the course of the semester based on the text. At the end of the semester, texts were examined and data collected on the following: the number and location of the broken glue seals, the proportion of major materials underlined, and the proportion of minor materials underlined. ANOVA's indicated a significant difference ($p < .005$) for the first and second sections of the text, indicating that seal breakage was relatively high for the early chapters and relatively low for the later ones. The proportion of major material underlined followed a similar pattern. Additional results and discussion are provided by the authors.

Annis and Davis (12) manipulated note-taking and review conditions with 85 college students. All students were presented a 40-

minute lecture about behavior modification. Experimental conditions were combined to produce the following 7 treatment conditions: 1) Subjects took notes and reviewed own notes, 2) subjects took notes and reviewed lecturer's notes, 3) subjects took notes and reviewed mentally, 4) subjects took notes and reviewed own notes and lecturer's notes, 5) subjects were given a copy of the lecturer's notes and reviewed lecturer's notes, 6) subjects were given a copy of lecturer's notes and reviewed mentally, and 7) a control condition. Two weeks following the lecture, a review session and an examination were administered consisting of 10 objective questions and 5 short answer questions. A single-factor unweighted-means ANOVA was used in data analyses. A significant ($p<.01$) treatment effect was found for the total score and for the number correct on the short answer questions. The authors discuss the importance of student note-taking and memory devices, as well as the apparent lack of effects regarding internal/external memory devices.

Carter and Van Matre (82) explored the effects of note-taking on subsequent performance on a learning task with 172 college subjects. A 17-minute recorded lecture was presented to subjects under 4 conditions: 1) Subjects took notes during the lecture and reviewed the notes afterward, 2) subjects took notes but engaged in mental review, 3) subjects listened to lecture then engaged in mental review, and 4) subjects listened to lecture then performed a letter cancellation task with no review. Additional manipulations of conditions included either immediate review or 1-week delayed review, verbatim or paraphrased test items, and high or low verbal ability. Significant main effects were found for study strategy ($p<.001$), time of review/testing ($p<.001$), and verbal ability ($p<.005$), based on a 4 × 2 × 2 unweighted means ANOVA. Additional analyses indicated that subjects who took and reviewed their own notes performed significantly better ($p<.01$) than subjects in the listening and mental review strategy, and that taking notes and performing a mental review was superior to listening with no review. The authors conclude that note-taking alone is of questionable value unless paired with review procedures.

Kulhavy, Dyer, and Silver (317) explored the effects of note-taking and underlining on learning. A total of 144 high school subjects read an 845-word passage; one group was intstructed to take notes, a second group was instructed to underline portions of the passage they thought were relevant, and controls were told to study carefully. All subjects were informed of a subsequent post test (30 multiple choice and 30 constructed response items), but they were shown non-related examples of the type of questions to expect. A 3 × 3 × 2 ANOVA was used in data analyses, followed by Scheffe's tests. The note-taking group performed significantly better than controls and underliners. Performance was also best on the multiple choice items. However, test mode performance was not influenced by the type of test the learner expected to receive. The authors discuss classroom implications of their findings.

Rickards and August (463) compared different underlining strategies for their effect on learning from text. A total of 90 college subjects were assigned to 6 different conditions: 1) SH: subject-generated underlining of high structural importance sentences, 2) SL: subject-generated underlining of low structural importance sentences, 3) SA: subject-generated underlining of any desired sentences, 4) EH: experimenter-provided underlining of high structural importance sentences, 5) EL: experimenter-provided underlining of low structural importance sentences, and 6) C: control condition with no underlining. The post test consisted of free recall of the experimental passage. Recall protocols were scored according to a method employed in previous research. Analyses were comprised of a 1-way (6 level) ANOVA followed by Newman-Keuls multiple comparisons. Results indicated that the SA group performed significantly ($p < .01$) better than any other group, and only they outscored the controls in total recall. The SH group recalled significantly ($p < .01$) more than the SL group. No other differences were found to be significant.

Howe and Singer (262) examined study and learning strategies in a group of 86 college subjects. Using a 286-word passage as the stimulus, subjects were assigned to 3 main experimental groups: Group 1 was told to read the passage during the allotted time; Group 2 was told to copy the passage; and Group 3 was told to make a summary of each paragraph in the passage. An immediate post test was then administered in which the subjects were asked to reproduce the passage in writing as accurately as possible. A fourth group was used as a check on practice effects for the delayed recall test; results indicated no significant practice effect or differences for delayed recall. There was, however, a main effect for treatment. Analysis of variance indicated that the subjects who were simply instructed to read the material performed significantly better on the immediate test than the other groups, and there was also a significant difference between the summarizing and copying groups, the latter performing worse than either of the others.

Howe and Colley (261) investigated the retroactive interference phenomenon with 18 university subjects. Experimental groups were presented an initial passage comprised of 15 sentences with an average sentence length of 16 words. Each sentence contained 2 idea units. Experimental subjects were then presented 2 additional passages similar to the original passage in which two thirds of the idea units had been changed. Controls received the same initial passage, but 2 entirely different additional passages. All subjects were first given a free recall test over each passage, then a cued-recall test consisting of 20 short answer items. The difference between the 2 groups in the changes between immediate and final test performance was statistically significant ($p < .025$) in favor of control subjects.

Rothkopf and Billington (474) focused on 2 purposes for their study: 1) to determine the relationship between the number of learning goals and decreased performance on goal-relevant test items, and 2) to explore characteristics of goal-descriptive directions that influence the recall of incidental text information. The 192 college student subjects were asked to read a 1,010-word passage on oceanography. Goal descriptive statements were available for all except control subjects. Treatments differed in the number of goals not achievable from the experimental passage and in the resemblance between the description of unachievable learning goals and the wording of critical text elements. A total of 7 treatments and 1 control condition were employed. One treatment (R5) involved 5 achievable, text-relevant, learning goals; 3 treatments involved lists of 10 learning goals: a) 10 achievable passage-relevant goals (R10); b) 5 achievable goals and 5 learning goals which could not be achieved but were similar to certain text elements (R5S5); and c) 5 achievable goals and 5 unachievable goals (R5U5). Another 3 treatments involved lists of 30 learning goals: a) 30 passage-relevant learning goals (R30); 10 passage-relevant learning goals and 20 unachievable goals similar in wording to preselected passage elements (R10S20); and 10 relevant and 20 unachievable, unrelated learning goals (R10U20). A post test consisting of 40 short-answer or completion items was administered. Of the 40 items, 5 were relevant to 5 learning goals common to all treatments except control; 10 items were incidental to all treatments; and the remaining were goal relevant, goal similar, or unrelated depending on the treatment. Subjects were randomly divided among treatments. For the 5 universally relevant test items, goal-descriptive directions resulted in better performance than the general directions of the control condition. There was also a reduction in the proportion of correct responses as the number of learning goals increased. Correct performance on the universally relevant test items decreased with an increase in the number of learning goals from 5 to 10.

Beyond 10, increases in the goals listed did not result in reliable decrements in performance. Experimental treatments resulted in a reduction in incidental learning with the control group achieving higher performance than any of the 7 treatment groups. Subjects performed better on questions about text segments which were similar to learning goals than about the same material when it was unrelated to instructional objectives.

Murray, Leung, and McVie (401) investigated the effects of response vocalization and interference with memory in college subjects. Experiment 1 required 40 subjects to read either high or low imagery nouns silently or orally and to recall them immediately or in a delayed condition. High imagery lists were learned better than low imagery lists, both in immediate and delayed recall. Vocalized lists, on the other hand, were better recalled in the primacy position of immediate recall, with a slight advantage over non-vocalized lists in the final positions of delayed recall also. Interactions among the variables indicated that vocalization affected delayed recall the most, while imagery affected immediate recall the most. Experiment 2 had 80 subjects read or listen to a short story; subjects were to recall as much of the story as they could. Upon completion of the story, some subjects were asked to read yet another story before the recall task—this being the interference material. If free recall required vocalization, scores were depressed. Auditory presentation appeared to be slightly better than visual, especially as regards interference effects. Experiment 3 required 64 subjects to recall pairs of trigrams; in one condition, trigram pairs consisted of a word and a nonsense syllable; in the other, 2 nonsense syllables. Further, subjects vocalized or read the trigrams silently under 2 conditions of speed. Vocalization had no effect on the learning of trigram pairs; syllables were learned more slowly than words, and there were no interactions among these variables.

Krulee and Schwartz (315) described an experiment designed to study the disruptive effects on immediate recall of interfering with the ability to scan ahead. Sentences printed on paper tape were pulled through a window the size of which could be controlled. Variables introduced included 2 sizes of exposure; 3 types of sentences; equational, transitive, and random strings of words; 4 lengths of sentences using 5, 6, 7, and 8 words; and 3 rates of presentation: slow, medium, and fast. A total of 32 sentences of each type were constructed using nouns, adjectives, verbs, and adverbs selected from the third, fourth, and fifth thousand groups of most common words listed by Thorndike. The syntactic structure for each length of sentence was controlled in order to eliminate this as a variable. Subjects were asked to memorize each sentence and repeat it. Errors increased as the exposure width decreased. The magnitude of the disruptive effect was most marked for longer sentences and the faster rate of presentation. The authors relate their findings to an information processing model of sentence recognition.

Color-word interference as a function of reading level was investigated by Fournier, Mazzarella, Ricciardi, and Fingeret (183). Half of the 20 third and fourth grade pupils used as subjects had been identified by teachers as good readers and half as poor readers. The reading scores on the *Iowa Tests of Basic Skills* were 82.1 per cent for the good readers and 38.6 per cent for the poor readers. Photographic negative transparencies were made of 50 rectangles, 50 non-color words, and 50 color words (red, yellow, green, and blue). The stimuli were arranged in 10 rows of 5 columns with a random order of verbal forms on non-color and color words. The trasparent stimuli were covered by patches of colored plastic tape in colors corresponding to the color words used. Order of tape color was random with the restriction that tape color and verbal form did not correspond. Time taken to name aloud a page of 50 colors was recorded. Colors were presented as 1) a color rectangle; 2) non-color words, in which the colors were presented as the words ONE, TWO, THREE, and FOUR; and color words, in which colors were presented as words. A significant effect was found for form presentation but not for reading level. The Reading Level X Form of Presentation interaction was significant (.05). Meantime good and poor readers did not differ significantly for color, but both groups took significantly longer for non-color words than for color. Good readers took significantly longer to name colors in color word form than in non-color word form, while poor readers showed no significant difference in mean time between these. The results suggested that words were attended to equally by both good and poor readers but that comprehension was greater for good readers.

Two experiments were conducted by Lyczak (350) to investigate the effect of color coding Thai syllables on learning their pronunciation and on transfer to syllables which were not color coded. A total of 96 psychology student volunteers participated. In Experiment I, 16 subjects were randomly assigned within blocks of 3 to each of the 3 treatment conditions. The experiment focused on learning how to read 5 Thai letters—1 vowel and 4 consonants. For subjects in group 1, all 4 consonants were color coded. For group 2, the letters were printed in black. For group 3, colors were randomly assigned to letters. Training consisted of 176 trials based on a set of 16 syllables presented 11 times.

The procedures in Experiment II were nearly the same as in Experiment I, with the addition of pretraining and pretraining instructions. Subjects who reached criterion during the training phase of the experiment then entered a testing phase, when they were presented with an additional set of 16 syllables printed in black without indicating whether responses were right or wrong. The presence of color as a redundant cue was found to have no significant effect on acquisition or transfer relative to a control group trained on uncoded syllables. When subjects were informed that color was a relevant cue and given pretraining which emphasized the color code, acquisition was facilitated, but transfer to uncoded syllables was impaired. When subjects were informed that color was a relevant cue and given pretraining which emphasized the shapes of the letters, acquisition was facilitated with no impairment on the transfer task.

Wirtenberg and Faw (587) examined the ability of good and poor readers to adopt and apply learning sets to problem solution tasks. Subjects in the study were assigned to 4 groups: younger normal readers, younger retarded readers, older normal readers, and older retarded readers. Retarded readers were at least 1-1/2 years behind in reading. Each subject was presented 2 nonsense syllables and was asked to choose one; one from each pair was arbitrarily chosen to be the correct and rewarded response. Additional pairs of different nonsense words were then presented requiring the application of the same problem solution. Nonsense word pairs, however, were varied along the irrelevant dimensions of color, size, writing style, and position. Thus, the question of most interest had to do with the subjects' ability to generalize the solution from one problem to another while ignoring all dimensions other than the pattern of letters. Results indicated a high correlation between task performance and intelligence; these 2 factors were then entered into an ANCOVA, partialling out the effects of intelligence. Data analyses revealed 2 significant effects: retarded readers required more problems to reach criterion than did the normal readers; and younger subjects required more problems to reach criterion than did older subjects.

Camp and Dahlem (75) studied poor readers' ability in both paired-associate and serial learning tasks. In Experiment I, 68 subjects who were enrolled in a behavior modification tutorial program in reading (all below third grade reading on the *Wide Range Achievement Test* were 1) presented 10 pairs of unrelated pictures from primer workbooks and asked to remember which pictures went together, and 2) presented 10 pictures in order and asked to recall them in order. Results indicated that subjects performed significantly better on the paired-associate task than on the serial task; few correlations between the 2 measures were significant. In Experiment 2, 24 similar subjects were presented the same paired-associate task and a serial learning task that required subjects to anticipate. While paired-associate performance was not different from Experiment 1, serial learning significantly improved.

Mayer, Stiehl, and Greeno (368) studied the effects of pre-instruction, aptitudes, instructional manipulations, and different post test item types on the acquisition of concepts in probability. In Experiment 1, 44 college subjects studied an instructional text in 2 sessions, then responded to a 30-item post test. Results indicated main effects for aptitude, but no differences for instructional treatment. In Experiment 2, 90 subjects worked problems dealing with the concept of probability. Instructional treatments were varied to emphasize meanings of concepts or computation, and pre-instructional treatments were varied so that subjects had different degrees of familiarity with the new content. The main effects of pre-instructional and instructional treatments were not significant, although there was a significant interaction between the 2. In Experiment 3, pre-instructional treatments were again manipulated; and results indicated that the learning of formuli served to increase computational ability. Experiment 4 again manipulated pre-instructional treatments. The authors discuss the different operations contained in pre-instructional and instructional treatments that contributed to learning the content.

Rothkopf and Billington (475) studied the effects of goal statements on the subsequent learning of relevant and incidental information by college students. Subjects read a 6,000-word passage under conditions of 12 specific learning objectives, 24 specific objectives, and a control group. Subjects then responded to a 70-item post test containing items relevant to objectives; incidental items not relevant to objectives, but topically relevant; and incidental items not systematically related to objectives. A 2-way ANOVA was used in data analyses. Results indicated that specific descriptions of learning goals resulted in higher performance on goal-relevant test items than the general directions given to controls. Relevant item performance was higher for subjects receiving 24 objectives than for subjects receiving only 12 and than that for control subjects. The experimental treatments tended to result in poorer performance on incidental items than the control condition. The authors provide an extended discussion of the theoretical implications of their findings.

Peters (437) examined the effect of restructuring concepts in social studies materials on the concept comprehension of 360 ninth graders. Using the Frayer model, concepts were classified according to relevant attributes and irrelevant attributes, and both examples and non-examples of concepts were presented. The traditional textbook approach consisted of defining the concept and presenting an example. Subjects were divided into 6 groups with equivalent numbers of good and poor readers in each group (based on the *Gates-MacGinitie Reading Test*, Form E). Concepts in both conditions were presented in 3 ways: chronologically, topically, and chronologically reversed. A concept attainment test of 20 items was constructed as the post measure. Results indicated that subjects using materials constructed around the Frayer model scored significantly better ($p < .0001$) than subjects in the textbook approach. No significant differences existed for concept arrangement within either method. Conceptually systematized materials appeared to be as effective for good readers as for poor readers. The author discusses the implications and limitations of the results of the study.

Geiselman and Riehle (192) investigated the effect of manipulating the logical and thematic ordering of related sentences on free recall. Two sets of 10 sentences about 2 different topics were presented to 48 college subjects under 4 conditions comprised of "best" ordering or scrambling one set of sentences. Subjects were instructed that they would be asked to recall one set of sentences, but were actually asked to write down as many of the 20 sentences as they could recall. Results indicated that subjects recalled sentences within the designated theme better than interference sentences. Totally, more sentences were recalled when interference sentences were presented in their "best" or logical order. Interference sentences had less of a negative effect on remembering target sentences if they were presented in their "best" or logical order. The authors discuss the results relative to organizational and rehearsal storage strategies.

Carver (84) investigated the effect on learning of a programed format for presenting prose materials. The format presents prose statements of several words, then a 2-alternative word choice set, one of which is the correct response. A total of 58 paid college subjects were presented a technical article under the programed format and under a regular prose format within 5 conditions: 1) regular prose under low motivation condition, 2) programed prose under low motivation condition, 3) regular prose under high motivation condition, and 4) programed prose under high motivation condition. A fifth group (control) took the subsequent test prior to and after reading the passage. Although all subjects were paid to participate, the high motivation condition consisted of subjects receiving a bonus for increased performance. The 100-item test consisted of the original material presented in such a way that some items contained letter manipulations where subjects had to recognize incorrect letters in words, and a set of paraphrased multiple choice items. Subjects were also administered 2 reading efficiency tests to control for individual differences. Under low motivation, the programed prose group scored higher than the regular prose group; under high motivation, the programed prose group scored lower than the regular prose group. The author discusses the results relative to the effect of prose formats on attentional behaviors.

Barron and Stone (33) studied the effects on reading of student-constructed graphic organizers. High school students were assigned to one of 3 groups: graphic advance organizer, graphic post organizer, and control. In all conditions, subjects read a 3,000-word passage about mental health. Experimental organizers consisted of an arrangement of terms relating to the major concepts in the passage in schematic form. Subjects in the GAO received an experimenter-constructed graphic advance organizer prior to the first reading of the passage, then read the passage a second time on the following day. Subjects in the GPO group read the passage on the first day, and constructed their own graphic post organizers on the following day. Controls read the passage on both days. Subjects then were administered a 25-item test of mental health vocabulary relationships. Results indicated the mean score of the GPO group was significantly ($p < .05$) better than that of the GAO group, while the difference between the GAO group and controls was not significant.

Marholin, McInnis, and Heads (358) used 3 behavior problem children as subjects in a study designed to investigate the effectiveness of free time as a reinforcer and the effect of reading performance reinforcement upon mathematics and English. Four conditions were used: 1) initial baseline, 2) reading reinforced, 3) chance reinforced, and 4) a final baseline. During the initial baseline period, the teacher maintained a record of items attempted and of correct problems during reading, mathematics, and English periods. During the reading reinforced period, free time was earned if during the reading period a child attained or surpassed the median accuracy score established during the initial baseline period. Rate and accuracy data were again collected for math and English. During chance reinforcement, a child blindly drew one of 3 cards on which the 3 subjects were written. The card selected designated the area upon which free time was contingent. For the final baseline, initial baseline procedures were reinstated. Accuracy of performance was used to evaluate reinforcement procedures. The results suggested that free time can function as a reinforcer. Improvements occurred in other areas when only reading accuracy was reinforced. Neither a reading reinforced nor a chance reinforced condition produced consistently differential results.

Haase (223) presented 2 experiments to determine whether levels of sonic effects affect the learning of words presented serially. In the first study, grade 5 pupils were randomly assigned to each of 3 sonic affect conditions: pleasant, neutral, and unpleasant sounding words. Sixteen words were identified within each level of sonic affect and then randomly assigned to either a visual or an auditory mode of presentation. Study 2 followed the same procedures with a college population. The results of both experiments suggested that sonic affect does effect word acquisition. At grade 5, positive and neutral words were more easily acquired than negative sounding words. For adult readers, affect within words appeared to enhance learning but which level of affect was unclear.

In the report by Evans, Horvath, Sanders, and Dolan (161), 14 special education children were exposed to 5 treatments to increase their attention and academic performance. Treatment 1 (weeks 0-5) was a no treatment, base-line phase. Treatment 2 (weeks 6-7) involved the teacher placing a check mark at 10-minute intervals on a card taped to the pupil's desk if the pupil was attending at the end of each 10-minute period. During Treatment 3 (weeks 8-14), the same reinforcement occurred as in the preceding stage except that pupils could exchange check marks or points for privileges. Treatment 4 (weeks 15-17) was the same as 3 except that a teacher aide joined the room. Treatment 5 (weeks 18-25) was the same as 4, except that the value of the check marks or points was changed. In this phase, a pupil had to be attending for 3 successive 10-minute periods in order to earn a point. Points could also be earned for each unit of work completed in arithmetic, reading, and writing. An increase in attending behavior followed the introduction of the aide in Treatment 4. Reading achievement as assessed by the *Wide Range Achievement Test* also showed a significant improvement during the period when the assistant was introduced into the program.

Ohnmacht and Fleming (422) proposed to determine if developmental changes in memory attributes for words were characteristic of both good and poor readers in grades 2 and 6. There were 20 subjects at each grade level—10 good readers and 10 poor readers. Ability levels were determined by scores on the *Metropolitan Achievement Test*. Subjects were presented with 40 words individually and then asked to select the word studied from a set of 4 consisting of the correct word, an associated word, a neutral word, and an acoustically similar word. Good readers at both grade levels tended to show associative dominance, but poor readers displayed no dominance. Poor readers at grade 2 made more errors than good second grade readers. Poor reading sixth graders made fewer errors than second graders and than good reading second graders.

An extensive study in book form was published by Meyer (384), who attempted to ascertain whether certain variables in prose could account for ideas people tend to remember from a passage. The variables included were the organization of ideas in a passage or the content structure, and the emphasis given certain information by the author or the signaling. College students were asked to read passages approximately 600 words in length. Their recall protocols were scored for the presence of content units and relationship units in each passage's content structure. A score indicating the number of people recalling each unit was determined. The relationships between the scores for each unit and the variables of structure and signaling were then investigated. Information high in the content structure of one passage was recalled better than when the same information was low in the content structure of another passage. One type of content found to facilitate recall was numbers and sequences of numbers. Signaling tended to increase recall, although the findings did not reach statistical significance. The author discusses the models of subsumption, retrieval, and selection as being able to explain some of the findings, but not all. The author concludes that the structure in prose is an important dimension on which to characterize passages.

Nelson, Brooks, and Borden (406) designed a series of 5 experiments attempting to separate the contribution of graphic and phonetic factors in a paired-associate list. In Experiment I, 12-item paired-associate lists were constructed so that, in certain conditions, stimulus word endings coincided with their respective response word endings. High and low phonetic and graphic similarity were factorially varied in different lists so that all pairs within a given list were similar on both dimensions, similar phonetically but not graphically, similar graphically but not phonetically, or dissimilar on both dimensions. Two sets of lists were constructed for each of these 4 conditions. There were 4 groups of 16 subjects—each with half the subjects in each group assigned to each list set. Subjects were undergraduate students. Fewest errors occurred when stimulus-response pairs overlapped on both dimensions, and the greatest number occurred when both phonetic and graphic overlap were low. In Experiment II, 10-item paired-associate lists were developed so that pairs of stimuli in different lists were high or low in either graphic or phonetic similarity. Two entirely different, but equivalent, lists were constructed for each condition, with 20 subjects—10 assigned to each list—within each similarity condition. Thus there were 80 subjects in all. Again both phonetic and graphic factors affected performance. Experiment III was done to determine if phonetic and graphic factors would generate interference under conditions of auditory presentation as they did in the visual presentation conditions of Experiments I and II. Responses, acquisition criterion, and other details were identical to Experiment II except for presentation in the auditory mode. Under the conditions of auditory presentation, visual similarity among pairs of stimuli produced no apparent disruption. The purpose of Experiment IV was to isolate the relative contribution of phonetic and visual factors at initial positions under visual presentation. The findings indicated that acquisition was disrupted by high graphic similarity. Experiment V was the auditory complement of Experiment IV. Phonetic similarity, graphic similarity, and the interaction of the 2 all failed to reach statistical significance. The authors conclude that the effectiveness of phonetic—as compared to graphic—attributes depends on the modality through which materials must be assimilated. Phonetic features appear to be processed when stimuli are presented either visually or aurally; graphic features appear to be coded only when stimuli are shown visually.

IV-6 Visual perception and reading

Thorson (544) presented a table of numerical values for shared distinctive features of the 26 uppercase alphabet letters. Letters were paired according to their degree of visual confusability. Visually confusable letters were those with 3 or more distinctive features in common. The resulting table was compared with reaction times between visually confusable sets of letter pairs and visually non-confusable sets. There was a significant difference in mean reaction times for the 2 sets of letter pairs.

Briggs and Hocevar (61) devised a distinctive feature analysis for printed capital letters by using 4 major features: curvature, horizontal linearity, vertical linearity, and diagonality. The analysis was adapted to discriminate all English capitals and to provide an index of similarity. Each letter was then compared with every other letter on the similarity index and a confusability index developed for each letter pair. Letter pairs with more features in common have a higher confusability index.

Lahey and McNees (322) published 2 experiments dealing with training perceptual skills in young children. In the first experiment, 40 subjects each were used from Head Start preschools, private preschools, and children enrolled in a summer remedial reading program. The latter group had completed grades 1, 2, or 3. Children were given a test of 50 match-to-sample items. The results showed that both preschool groups made errors but that Head Start children made significantly more. Few errors were made by the poor readers, and most of those were made by the children who had just completed first grade. In the second experiment, 29 low income pupils who had made 4 or more errors on the screening test used in the first study were selected to individually participate in eight 30-minute sessions in which they were presented with a series of match-to-sample letters in 3 phases: 1) No Reinforcement 1 (NR1), in which subjects were not told whether they were right or wrong; 2) Training, in which 12 different sets of items were made up for 20 letters; and No Reinforcement 2 (NR2), a repeat of NR1. The treatment groups differed only in phase 2. For one group, a fading procedure was employed in which the sample letter and the correct choice were initially larger than the other letters but were gradually decreased in size until they were the same size as the others. The No Fading group used the same items but with no size difference. Correct responses were reinforced verbally and with a poker chip which could be changed in for a penny when 10 had been earned. When results were analyzed, fewer errors were made in NR2 than in NR1 by both groups. There were no significant differences between groups in the number of errors made during NR2. The authors conclude that problems in letter discrimination can be effectively modified by operant techniques.

Letter discrimination training and its transfer to a trigram recognition task were investigated by Ralls and Fry (459), using children from 4 morning kindergarten classes in a semi-rural elementary school. The 64 children in the experiment were randomly selected as subjects. The subjects, possessing little knowledge of the alphabet, were assigned randomly to one of 2 treatment groups, known as the orientation pretraining group and the no orientation pretraining group. A factorial design was employed to analyze the effects of orientation pretraining versus no pretraining, simultaneous versus successive stimuli presentation, and reversible versus dissimilar letters on learning and transferring training in letter discrimination. A multivariate analysis of variance disclosed that while pretraining facilitated learning the discriminations, presentation method and stimulus type did not. The presentation method by stimulus type interaction for number correct during discrimination training was significant at the $p < .07$ level. No effect was noted on transfer task performance.

The impact of training children to copy and to discriminate letter-like forms was explored by Williams (583) in a study of 40 black 4 and 5 year olds from low socioeconomic homes. The subjects were randomly assigned to 4 training conditions: reproduction (copying), discrimination (matching-to-sample), a combination of reproduction and discrimination, and no training control. Six letter-like forms were used for testing, and 3 of these forms were used as standards in training. The experiment was a 4 × 2 × 2 factorial design which was employed to include the 4 treatments, sex, and 2 training forms, with 5 subjects per cell. Each subject was seen 5 times. Four tests were administered, including the *Berry-Buktenica Test of Visual-Motor Integration*. The results of the experiment indicated that effects of training were quite specific: that is, discrimination training improved performance on the discrimination test but not on the reproduction test, and reproduction training improved performance on the reproduction test and not on the discrimination test. The combination training was as effective as the reproduction training on the reproduction test, however. Finally the effects of discrimination training were seen both on forms used in training and on other similar forms, while the effects of reproduction training were seen only on trained forms. Implications for instruction in reading and writing were discussed.

The purpose of the research by Cohn (96) was to explore the letter recognition difficulties of primary children from lower socioeconomic families. Subjects were 322 children who in October failed to decode 3 or more words on the first grade word list of the Durrell Analysis of Reading Difficulty. Most of the subjects were first graders. Each child was asked to name all the lowercase letters, presented in scrambled order. Responses were recorded to find out which letters were mistaken for others, and an error frequency chart was made. Incorrect responses were studied to differentiate between random and systematic errors. Systematic errors were then studied in an effort to discover which factors made it difficult for these letters to be correctly named. A frequency chart of errors revealed the *l* was the most frequently missed letter. Of the 225 children missing it, 146 called it *i*, and 66 called it *one*. The next 5 letters in order of decreasing difficulty were *q*, *g*, *d*, *t*, and *b*. The least frequently missed letter was *o*. A closer examination of 34 individual children was made. Of their 195 total errors, 63 were reversed errors and 132 were gross differentiation errors.

In a report by Copple (106), the effect of 3 variables on the performance of children of different social class and race in discriminating similar letters in words was viewed. Subjects were 40 middleclass children, 40 lower-class children, and 10 controls, equally divided by sex and social class. The discrimination pretest and post test called for a matching to standard task consisting of 16 trigrams. One response choice was identical to the standard; the other differed by 1 letter. Discrepant letters were *b* and *d*, *p* and *q*, *m* and *n*, or *v* and *w*. In training trials practice, only the discriminations *b* versus *d* and *m* versus *n* were included. On half the trials the child saw the 2 choices while the standard was in view (standard-present); on the other half, the choices were presented after removal of the standard (standard-absent). Fifteen minutes of training on each of 2 consecutive days within 1 week was given. Children were given immediate feedback on correctness of response during training but not during testing. The 8 experimental groups set up were each given a particular combination of 3 independent variables: 1) single-feature versus multiple-feature difference between the letters distinguishing the trigrams, 2) standard-present versus standard-absent matching, and 3) use of an overlay procedure. Subjects who made 3 or fewer errors on the 16-item pretest were eliminated from the analysis. A total of 48 experimental and 6 control subjects were used in the final analysis. Pretest scores revealed no significant differences on any of the variables for the 8 groups. No significant differences were noted as a function of social class on the post test. There was a main effect in favor of the overlay procedure. Further analysis indicated that the importance of the overlay procedure was mostly accounted for in the improvement of *b* versus *d* and *v* versus *w*. Post test performance in distinguishing *b* and *d* was significantly better in the standard-absent than in the standard-present groups. Middleclass children made fewer errors both prior to and following training.

A comparison of the effectiveness of perceptual-motor training and orthoptic training with underachieving children was undertaken by Greenspan (211). Criterion tests included the *Slingerland Tests for Identifying Children with Specific Language Disability* (ratings for lateral form reversals, sequence transpositions, and total reversal confusions); the *Kirshner Directionality Test* (time score, and number of errors of left-right identification); and the Position in Space subtest of the *Marianne Frostig Developmental Test of Visual Perception* (raw score and norm discrepancy). The perceptual-motor group was significantly superior in improvements on the Frostig subtest and in total errors on the Slingerland. No significant differences were found for the other measures.

The major concern of the research by Colarusso, Martin, and Hartung (99) was the degree of relationship between scores on the

Marianne Frostig Developmental Test of Visual Perception and scores on the *Scholastic Research Association Achievement Test Battery* (SRA). In addition to the Frostig, each child was given the *Kuhlman-Anderson Test of Mental Ability* in grade 1. Primary Battery Form D of the SRA was given in grade 2, and the SRA Primary II Battery Form F was given in fall of grade 3. Raw scores on the subtests of the Frostig and on the subtests of the SRA tests were correlated. Step-wise multiple regression analyses were also computed. None of the Frostig scores were deemed to be useful predictors of grade 2 achievement, nor did any Frostig score correlate at or above .40 with SRA reading at grade 3. Separate multiple regression analyses were performed to determine the ability of the 5 Frostig subtests and IQ to predict reading and math achievement scores at grades 2 and 3. Form Constancy was the best predictor of reading vocabulary at both grade levels, while IQ and Position in Space contributed to the prediction equation. Form Constancy was also the best predictor of grade 2 reading comprehension, while at grade 3 this skill was best predicted by Position in Space with IQ and Form Constancy as contributors.

Bradshaw (54) presented his subjects with a tachistoscopic display consisting of a centrally located homograph sandwiched between a disambiguating word on one side and a letter string on the other. His purpose was to note whether the perceived meaning of the ambiguous homograph was affected by the peripherally located biasing item, even when subjects could not report the latter. A list of 112 homographs were identified as satisfying the following criteria: 1) not less than 3 or more than 5 letters long, and 2) having only 2 commonly occuring meanings. The homographs were presented in the same order in 2 different series to which they had been randomly assigned. Disambiguating words were distributed pseudo-randomly and equally to the left or right of the homograph. A letter string of randomly ordered consonants equal in number to the letters of the disambiguating word (3 to 6 letters) was presented on the other side of the homograph. Immediately following the homograph slide, subjects saw a second slide containing 2 possible meanings for the homograph. The subjects were to select one. The stimulus homograph slide was presented for 125 msecs., a speed which did not permit scanning eye movements. The subjects were asked to write down anything else seen or thought to be seen in addition to the homograph. A small but significant effect was found favoring the view that unreported items beyond fixation did influence the semantic interpretation of the homograph.

Stanley, Kaplan, and Poole (522) were concerned with the comparison between groups of normal and dyslexic children on such tasks as visual matching with spatial transformation (VMST), tactual serial matching (TSM), visual sequential memory (VSM), and auditory sequential memory (ASM). The 33 dyslexic children were identified by their remedial teacher and met the following criteria: 1) at least 2.5 years below normal in reading ability, 2) performance at average or above level in other subjects, 3) absence of gross behavioral problems, and 4) absence of organic disorders. Control pupils were selected by teachers as being average to bright. The subjects came from 4 inner-suburban primary schools in Melbourne, Australia, and ranged from 8 to 12 in CA. The 2 groups of VMST children were presented with 26 photographs of 3 forms, 2 of which were the same. In the TSM task, wooden replicas of the forms were presented. The ASM and VSM subtests from the revised *Illinois Test of Psycholinguistic Ability* were administered. The dyslexic group performed more poorly than the control group in both ASM and VSM tasks, but on the other 2 tasks, performances were comparable. Thus the results indicate that dyslexics are not deficient in visual spatial transformation ability per se.

One report investigated the relationship between perceptual-motor tasks, conservation skills, and readiness for school. Ayers, Rohr, and Ayers (22) administered the *Purdue Perceptual-motor Survey*, 6 Piaget conservation tasks, and the *Metropolitan Readiness Tests* (MRT) to 38 kindergarten and 56 first grade children. The *Peabody Picture Vocabulary Test* was also given to assess intelligence. As a group, the children were above average in IQ and on their MRT scores. Pearson product-moment coefficients were run of composite scores of the Purdue Scale and IQ with the MRT scores. Significant coefficients of .224, .429, and .24 were found between Purdue Scale scores and the Listening and Copying subtests and composite score respectively on the MRT. A coefficient of .496 was obtained between the IQ score and the total MRT score. The *eta* correlation technique was utilized to determine the relationship of Piaget tasks to the other tests. A coefficient of .384 was found between the Piaget tasks and IQ scores, and .48 between the Piaget tasks and MRT scores.

Egeland (153) examined the differential effects of errorless and reinforcement-extinction training procedures on the discrimination performance of preschool children. In addition, errorless training highlighting a relevant cue was compared with the effectiveness of errorless training highlighting an irrelevant cue. Subjects were 108 children, ranging in age from 4-3 to 5-3, who were unable to identify any letters of the alphabet. All were from lower-class backgrounds and were enrolled in a prekindergarten program offered by a public school system. In 2 groups, errorless training was used to teach discrimination between letters of the alphabet. In Group 1, the obvious cue was superimposed over the feature of the letter differentiating it from its paired comparison letter. For Group 2, an irrelevant cue was highlighted. Group 3 was taught to discriminate between letters, using a reinforcement-extinction procedure. There were 54 children assigned to one of the 3 treatments groups. Each child was taught to discriminate 3 pairs of letters presented in counterbalanced order. The other 54 subjects were assigned to one of the 3 treatment groups and taught to discriminate between 3 other pairs of letters. All groups had 3 warm-up trials, 10 training trials, 5 post test trials, and 5 delayed post test trials given 1 week after training. Errorless training groups were given no feedback after a training trial, whereas reinforcement-extinction subjects were told whether or not their responses were correct after each training trial. Six uppercase letter combinations were used with relevant or irrelevant cues highlighted in bright red on the first trial. The highlighted cue was then gradually faded until it was no longer seen by the tenth trial. The number of errors made by Group 1 was significantly less than those made by Group 3. There was no significant difference between the number of errors made by Group 2 and the number made by the other groups. For delayed retention, Group 1 made significantly fewer errors than the other 2 groups. The author notes that the effectiveness of errorless discrimination training seems dependent upon whether or not the obvious cue is used to highlight a relevant or irrelevant dimension of the letter to be discriminated.

Speer and Lamb (518) explored the relationships between end of grade 1 standardized reading scores and 4 other measures: 1) fluency of letter identification at the beginning and end of first grade, 2) the effect of practice on letter identification fluency at the beginning and end of first grade, 3) the fluency with which children identify graphonemes (closed syllables) at the end of first grade, and 4) the effect of practice on graphoneme identification at the end of first grade. The *Gates-MacGinitie Reading Test*, Primary A, was used as the standardized reading measure. Two author-designed tests were also used: the Say-Letters-Random, administered in October and April; and the Say-Graphonemes-Random, given in April. Coefficients of correlation between the mean, initial, and final scores of the letters and graphonemes tests ranged from .72 to .88. Coefficients between the mean, initial, and final scores on the letters test, and raw scores on the Gates-MacGinitie ranged from .68 to .85. For the graphonemes test and the Gates-MacGinitie raw scores, coefficients ranged from .77 to .92. The authors conclude that their findings support the theory that visual processing fluency is a significant factor in reading.

The effects of discrimination training involving highly confusable letters was evaluated by Nelson and Wein (407). Subjects were 3 groups of 8 preschoolers. The groups were matched on the basis of age, sex, day care center attended, and pretest scores for letter discrimination. The 3 groups consisted of a control group and 2 experimental groups, one taught to discriminate among letters of low confusion and the other, among high-confusion alternatives. The task required was matching-to-sample. Children in both experimental groups were trained to criterion—2 consecutive days with no errors on the appropriate set of 29 slides. All subjects were again given the same post test, which consisted of 58 matching-to-sample slides. All groups improved from pretest to post test. Both training groups performed significantly better on the post test, as compared with the pretest, than did the control group. The high-confusion group required significantly more training trials than the low-confusion group, and the performance of the high-confusion group over the low-confusion group approached significance ($p < .06$).

Vellutino, Steger, DeSetto, and Phillips (559) designed a study investigating the hypothesis that specific reading disability is attributable to inadequate visual memory. Poor and normal readers unfamiliar with Hebrew were presented with randomly arrayed Hebrew letters immediately after presentation, 24 hours later, and 6 months later. Their performance was compared with that of normal readers familiar with Hebrew letters. A total of 126 subjects were used, 42 at each of grade levels 2, 4, and 6. Retention in the non-Hebrew groups was equivalent under all temporal conditions, but both showed poorer performance than the Hebrew groups under the immediate and 24-hour conditions. None of the groups differed in retention after the 6-month delay. The authors conclude that their findings suggest that deficient visual memory is not a significant cause of specific reading disability.

Two sets of experiments were conducted by Estes (159) in order to analyze the effects of word versus non-word context on the direction or identification of letters in tachistoscopic displays. In the first experiment, subjects were presented the signal letters *R* and *L* in 3 types of displays: words, non-words, and single letters. All displays contained 4 serial positions. For the single letter displays, the 3 positions not occupied by the signal letter were filled with noise characters chosen to be highly dissimilar from the signal letters. Correct detections were 84 per cent for single-letter, 76 per cent for word, and 69 per cent for non-word displays. Mean correct latencies were 706, 844, and 838 msecs. for single-letter, word, and non-word displays, respectively. In a second part of Experiment 1, subjects were assigned to a continuing context or a following context condition. Continuing context was virtually the same as the earlier part of the study, except that noise characters were exchanged. In the following context condition, the noise characters in the non-target locations were replaced by the letter that constituted the word or non-word context, and these letters remained in view until the subject made his or her response. Correct detections for this phase of the study were 88 per cent, 88 per cent, and 82 per cent for single-letter, word, and non-word displays, respectively. In Experiment 2, 12 subjects were used in part A; 12 in part B; and 8 in part C. On word-word displays (W-W) and non-word-non-word (N-N) displays, *L* and *R* were cued half the time; the other half of the time, some other letter in the display was cued. On all W-N and N-W trials, a letter other than *L* or *R* was cued. On half of the single-letter trials, *R* or *L* was cued, but on the remaining single-letter trials, the letter cued on one of the W-N or N-W displays replaced *R* or *L*. Subjects were instructed to report the letter in the position marked by an arrow. In Part A, subjects were run through all 288 experimental trials under a simultaneous context condition. The context was available only during 50 msecs. when the target letter was being displayed. In Part B, all 288 trials were run under following context conditions with word or non-word context available only during the post mask. For Part C, subjects were run for all 288 trials under a delayed context condition. The findings indicated that when target letters are not known in advance and the subject is given a post exposure probe for the position to report, letters embedded in words are identified better than those embedded in non-words, and even the latter are superior to letters presented alone. The inferior performance on single letters was almost entirely attributable to the greater incidence of omission errors. Differences between words and non-words seemed mostly attributable to the decreased incidence of transposition errors in a word context.

Nodine and Simmons (418) designed their experiment to study information extraction and processing strategies of children as revealed by eye movements. The 10 kindergarten and 10 grade 3 children used as subjects were presented with 40 symbol pairs of letterlike forms—20 matched and 20 unmatched. Subjects were to identify each pair as *same* or *different*. Pairs differed on one of 4 dichotomous feature dimensions: form, opening, line, and origin. Analyses of variance were computed for number of fixations, number of frames (time), and number of cross comparisons. Error rate for both groups of subjects was 10 per cent, with most errors occurring for feature dimension opening. Grade 3 pupils required half as many fixations, frames, and cross comparisons per pair to arrive at the same-different judgment. They also fixated proportionately more distinctive features (.41) than did kindergarteners (.36). The authors attributed the greater selectivity and economy in the extraction and processing of information on the part of older children to increased cognitive programing of eye movements.

Ritter and Sabatino (466) proposed to determine the varying effects of methods of measurement of task performance for first graders of average or above IQ's. Each of the 64 subjects was individually administered 8 tasks of visual figure-ground perception and form discrimination. Four methods of measurement were utilized: tachistoscopic-naming, untimed-naming, tachistoscopic-recognition, and untimed recognition. The results indicated that performance fluctuated with alterations in the method of measuring the task. Findings suggested that there may be a greater contribution of method variance to scores than has been assumed. The authors discuss the implications of their findings for practitioners.

IV-7 Auditory perception and reading

The subjects in the study by Williams (584) were 48 black fifth graders drawn from 2 diverse populations. The purpose of the study was to compare performance on the *Wepman Auditory Discrimination Test* (WADT) with speech patterns. Two informal instruments were constructed to identify speech patterns. One consisted of a reading passage containing words lending themselves to neutralizations characteristic of black dialect. The passage was followed by 7 comprehension questions read to the child. A second instrument used a sound-matching task to further assess the presence of neutralizations. A score was tabulated for each child based on the 15 items from the 2 tests which best measured speech patterns. Pearson product-moment correlation coefficients were computed between WADT errors and errors on 3 WADT items corresponding with neutralizations and the speech pattern score. Speech pattern scores were divided into high, average, and low groups. The WADT scores of the 3 groups differed significantly. They also differed on items 25 and 28 (clothe/clove and sheaf/sheath) on the WADT; thus the findings supported the hypothesis that speech patterns are predictive of performance on the WADT. When items 25 and 28 were removed from the test, there was no significant difference among performance of the low, average, and high groups on the WADT.

A study investigating the auditory discrimination test scores of normal and learning disabled children under both quiet and noisy listening conditions was described by Nober and Nober (417). The 20 learning disabled and 20 normal subjects were each randomly selected from grades 4, 5, and 6 in 3 schools. Subjects were administered both forms of the *Wepman Auditory Discrimination Test* (WADT). One form of the WADT was administered in the quiet listening situation of a special teacher room; the alternate form was given in the same room but with tape recorded classroom noise at about 65 dBA sound level. Results showed that learning disabled pupils made significantly more auditory discrimination errors than normals under both conditions. Both groups made more errors under noise than under quiet conditions. The authors concluded that auditory discrimination scores in quiet do not reflect accurately the expected value for the classroom.

IV-8 Reading and language abilities

Edwards (152) examined the influence of dialect in particular on the comprehension of West Indian children. An analysis of various aspects of West Indian dialect was presented. Then an analysis was done of the *Neale Analysis of Reading Ability* focusing on the structures and vocabulary which might account for difficulties specific to West Indian English as well as the general difficulties. A group of 40 English and 40 West Indian first-year, secondary school children were used as subjects. All were between the ages of 11-3 and 12-6. Children were asked to read the Neale Analysis and were given help if they asked for it, if they needed it, or if their misreadings would affect answers to the comprehension questions. Features of dialect were not counted as errors. No significant differences were found for either the means or variability of scores for the 2 groups; therefore, comprehension tasks were viewed independently of reading performance. Children were divided into slow, average, or good readers depending on reading age on the Neale. No differences were noted for mean comprehension ages for the slow group. However, the average and good reader levels of English speaking children performed significantly better on comprehension than did West Indian children. The author considers the linguistic factor to be the most probable explanation for the differences in scores.

Mathewson and Pereyra-Suarez (365) investigated the effect of language background on second graders' auditory conceptualization. A total of 80 subjects, 34 with Spanish surnames, were administered the *Lindamood Auditory Conceptualization Test*, measuring several basic concepts (first-last, left-right, numbers, etc.) and the ability to perceive isolated sounds and sound petterns. Additionally, subjects were administered tests of language interference (sounds confusable in Spanish) and non-interference sounds. Reading achievement was assessed with the *Wide Range Achievement Test* and the *Cooperative Primary Test*, while SES was measured on a 1 to 5 scale. Analyses of variance showed that there was a significant interaction of test (interference or non-interference) with ethnicity, indicating that Spanish language background interferes with auditory conceptualization. Better readers scored higher on auditory conceptualization than poorer readers. The interference test tended to be more difficult for all subjects. Multiple regression analyses indicated that 33 per cent of the variance in reading among the Mexican-Americans was shared by auditory conceptualization and SES, while only 21 per cent of reading score variance was shared in this way for other subjects. Additional findings and discussion are presented.

VanMetre (557) attempted to describe selected syntactic characteristics of bilingual (Spanish and English) children of high and low reading ability. Subjects were judged high or low in reading according to scores from the *Metropolitan Achievement Test*, Reading subtest. Monolingual subjects from the same school, both high and low in reading ability, served as controls. All subjects were administered 4 measures of syntactical ability described by Chomsky. Bilingual subjects high in reading preformed significantly ($p < .05$) better than their low reading counterparts on 3 of the 4 syntactical measures. Monolinguals high in reading scored significantly better than their low reading counterparts on all syntactical measures. There were no differences between high reading bilinguals and high reading monolinguals on the syntactical measures. The author discusses the classroom application of the findings.

Walker (570) investigated dialect interference with reading in third grade children from Newfoundland. After verifying grammatical structures peculiar to the Newfoundland dialect, a 118-word passage was constructed in 2 forms: standard English and a dialect version. Readability of the passage was first grade. A final sample of 60 third graders was administered the *Gates-MacGinitie Primary Reading Test*. Subjects were subsequently divided into 3 groups on the basis of reading achievement; within each group, half the subjects received the standard and half received the dialect version of the stimulum passage. Oral reading protocols were analyzed using the miscue analysis system devised by Goodman and Burke, yielding measures of the total number of miscues, the number of dialect miscues, and reading time. Analyses of variance indicated that, totally, subjects who read the standard English version of the passage read significantly faster, with fewer total and fewer dialect miscues. Reading achievement level of the subjects appeared to make little difference. The author provides discussion of results as well as a complete rationale for the preparation of the dialect version of the stimulus passage.

Kachuck (277) studied the oral language characteristics of 20 black first graders from a low socioeconomic area in New York City. Subjects were shown 10 picture books and asked to choose 1 or 2 and then to tell stories about the illustrations. The investigator prompted with questions, such as "What's happening here?" "What do you think?" and so on. Three aspects of the children's oral language were subsequently studied in 30-minute taped sessions: 1) vocabulary produced, including total number of words, number of different words, and part of speech; 2) number and mean length of T-units; and 3) dialect features including the final /s/, substitution of participle forms for present-tense singulars, and nominal reiteratives. Totally, the subjects produced 30,478 words, 1,955 of which were different. Individual total productions ranged from 631 to 3,956, while individual productions of different words ranged from 187 to 717. A breakdown of vocabulary productions by part of speech is included. The mean T-length was 7.03 words. Compared to white middleclass T-unit lengths, the T-unit length of the present sample was slightly shorter. Dialect features were not used consistently by the group, and no child's speech included all 3 features as a consistent pattern. Only 1 feature appeared with any consistency at all, this being the final /s/ ommission. Data analyses indicated no support for the use of dialect readers in beginning reading instruction. Additional implications of the study are discussed.

Wiig and Roach (581) examined the sentence repetition ability of adolescent subjects identified as learning disabled. LD subjects exhibited academic retardation of at least 1.5 grade equivalents in 2 or more areas. These subjects were matched to a control group with similar characteristics except for academic retardation. All subjects were read 20 sentences and asked to repeat them verbatim. Totally, *t* tests indicated that LD subjects performed significantly less well than normals. The LD group made more errors on sentences that were syntactically well formed but violated semantic rules, sentences containing modifier strings in both correct and incorrect order, sentences comprised of random word strings, and structurally complex sentences.

Wiig and Semel (582) compared various test performances of LD and normal adolescents. LD subjects were identified as having a

WISC IQ of at least 85, a discrepancy between Verbal and Performance IQ's of 10 or more points, retardation of at least 2 years in achievement (*Metropolitan Achievement Test*), and deficiencies on the *Illinois Test of Psycholinguistic Abilities* and the *Detroit Tests of Learning Aptitude*. The experimental test battery was comprised of 1) Verbal Opposites from the DTLA, and 2) Visual Confrontation Naming, Fluency of Controlled Association, and Rating Scale Profile (conversational speech) from the *Boston VA Test*; and sentence production and word definition from the *Minnesota Test for Differential Diagnosis of Aphasia*. In comparison to normals, the LD group was significantly less quick and accurate in naming verbal opposites and pictorial presentations, produced fewer word labels, produced more agrammatical sentences and sentences of shorter length, and gave more incorrect word definitions.

Semel and Wiig (495) investigated the efficacy of 2 language related tests as screening devices for identifying learning disabled children. Two groups of LD children (younger and older), as well as a group of normal achieving subjects, were administered the *Northwestern Syntax Screening Test* and the *Assessment of Children's Language Comprehension*. All LD subjects exhibited discrepancies between Verbal and Performance IQ's on the WISC specific modality deficits as measured by the *Detroit Tests of Learning Aptitude*, and achievement retardation ranging from 2 to 4 grades. Data analyses to determine significance of differences in NSST performance were conducted using t tests and z tests, while ACLC performance was judged according to the normative data for the test. Correlations were also computed among the experimental measures, intelligence (WISC), and achievement (*Peabody Individual Achievement Test*). LD children scored significantly lower than their controls on the NSST receptive subtest, and a significant percentage scored below the 10th percentile when compared with normative data. Few differences were found relative to the performance of LD's on the ACLC. Performances by the younger and the older LD children did not differ on the NSST and ACLC.

Ball, Wood, and Smith (28) presented a series of 3 studies exploring the notion that semantic targets can be detected faster than visual or acoustic ones when searching through meaningful prose. In the first experiment, subjects were presented with either an 11-word sentence or a scrambled version of these sentences and were asked to search it for a target defined either visually, acoustically, or semantically. One group of subjects were instructed to read each string for meaning and a second group was told to ignore any semantic content and simply scan for the target. Subjects were 36 undergraduates. Semantic targets were detected faster than either visual-syllable or acoustic-syllable ones, regardless of instructions or whether the materials were sentences or non-sentences. The second and third experiments indicated that the advantage of semantic targets over visual or acoustic ones was considerably reduced when all 3 types of targets were words.

Kolers (307) examined the effects of typography, orientation, language, and modality of presentation of sentence reading. Experiment 1 required subjects to read 84 sentences typed in normal orientation (N), or inverted (I). Subjects read these sentences again; the sentences appeared normally on the first reading but inverted on the second (NI) or inverted on both readings (II). Time to read the sentence on the second presentation was measured. The main finding was that speed of reading inverted typography was affected by prior experience with both the typography and the sentence. In Experiment 2, 7 types of sentences were presented to subjects in both French and English under the same task requirements as in Experiment 1. Repeated sentences were the NI and II variety. Results indicated that facilitating effects on time to read sentences were not due primarily to semantic features of the sentences that were abstracted out of their surface representations and applied to the encoding of the inverted sentences. The main influence was due to practice at reading the particular words themselves. In Experiment 3, sentences were auditorally presented to subjects. Findings in Experiment 3 essentially replicated those of Experiment 2. The author provides extended discussion of the findings from all 3 experiments.

Kolers (308) investigated the graphemic and semantic aspects involved in sentence remembering with college students. Subjects were asked to read 2 sets of sentences. Sentences in the second set contained all of the sentences in the first set plus an equal number of new ones. Of the old sentences in the second set, 1/3 appeared in the same typography as in the first set, and 1/3 appeared in 2 different typographies. Subjects were required to read each sentence in the second set and place it immediately into one of 3 categories: new sentence; same sentence—same form; same sentence—different form. Results indicated that subjects retain for lengthy periods detailed information regarding the pictorial (graphemic) aspects of sentences they have read.

Evans (163) examined the relationship between sentence segmentation ability and reading and prereading behaviors in kindergarten and first grade children. Subjects were orally presented sentences of from 3 to 8 words, utilizing sentence structures of increasing linguistic difficulty. Subjects were then asked to repeat the first word, second word, and so on. The *Metropolitan Readiness Test* and the *Gates-*

MacGinitie Primary Reading Test were given in September and December, respectively, as was the experimental task. Between test administrations, nearly all subjects had evidenced some ability to segment sentences into words. Although there existed no predictive relationship between the segmentation task and early reading performance, the better readers (December administration) were also significantly better on the segmentation task. Overall, kindergarten subjects evidenced the same developmental pattern as the first graders, but the increase was not as dramatic.

The oral language facility of grade 1 Canadian children and its relation to reading was the focus of a study by Rodgers, Slade, and Conry (468). A number of oral language tests were administered to the sample. A fluency score was obtained from a count of the total number of words used to describe a picture and the total number of words used in retelling a story. Measures were also taken of vocabulary, using the vocabulary subtest of the *Lorge-Thorndike Intelligence Test*, the range of words used in response to a picture, and a definitions test involving common words which yielded an index of relevant information, descriptive information, and functional information used in defining words. Usage of connectives was also measured. Finally, the *Cooperative Primary Tests* were administered at the end of grade 2. Data analyses were first designed to separate the total sample into subgroups reflecting oral language facility. Cluster analyses separated the subjects into 3 groups. All 7 oral language measures appeared to differentiate the 3 groups. The best differentiator among subgroups was the total number of words used in retelling a story, while the least powerful indicator was functional information from definitions. A discriminant function analysis was then performed to determine which of the 7 measures could be used as a minimum set of indicators. After total number of words used in retelling a story and range of words used in describing a picture were entered into the analysis, no other measures added significantly to the discrimination ability. Finally, an ANOVA was conducted in which was entered reading subtest scores from the CPT. The reading differences among the oral language subgroups were found to be highly significant. It was observed that the reading test means of the 3 groups were in the same rank order as the profiles resulting from the cluster analysis.

In a series of 7 experiments, Osgood and Hoosain (427) investigated tachistoscopic thresholds for words and non-word morphemes, and thresholds for ordinary and nominal compounds. In Experiment 1, 32 subjects were presented monosyllabic and multisyllabic words and non-word morphemes in an effort to determine if non-word morphemes had higher thresholds than single or multiple morpheme words matched in letter length and configuration. Results of Experiment 1 indicated support for both hypotheses; words were significantly more salient than non-word morphemes. The purpose of Experiment 2 was to compare words and non-word morphemes of near equal frequency to see if non-morpheme trigrams had higher thresholds than 3-letter non-word morphemes; the latter were predicted to have higher thresholds than 3-letter words. In terms of recognition, the hypotheses of Experiment 2 were generally supported. For guessing, differences between morphemes and trigrams were not significant. Experiment 3 was devoted to a comparison of words with supraword units or nominal compounds (*e.g.*, peanut butter/butter made from peanuts). Thirteen nominal compounds, along with 26 single words, were presented tachistoscopically to 15 subjects. Results indicated that guessing thresholds were significantly in favor of words, and that upon second presentation, there were no significant differences between thresholds for single words and nominal compounds. The final 4 experiments were directed toward a clarification and extension of the findings in Experiment 3. Experiment 4 indicated that differences in thresholds between single words and nominal compounds where single words during the first presentation were recognized more quickly were primarily attributable to extreme differences in frequency of usage of the items as wholes. Experiment 5 indicated a clear facilitation effect upon thresholds for single words due to prior presentation; prior presentation in the context of a nominal compound did not have the same facilitative effect. Experiment 6 was a repetition of Experiment 3, using instead unrelated noun pairs or nonsense compounds. Results indicated a facilitation effect for single words presented after compounds. This effect held for recognition but not for guessing. Additionally, recognition thresholds for meaningful compounds (Experiment 3) were markedly lower than for nonsense compounds for both first and second presentation. Experiment 7 repeated Experiment 6 with 1 exception: meaningful compounds that were semantically intact were used; however, these compounds, although they conveyed semantic information, were not in the dictionary and not considered regular compounds (*e.g.*, copper block). Thus, 3 types of stimuli were compared: regular noun phrases, nonsense compounds, and nominal compounds. Results of Experiment 7 indicated that ordinary noun phrases functioned like nonsense compounds in that their word constituents retained their identity in the compounding process. The authors provide a general discussion of the results of all 7 experiments.

Tuinman, Blanton, and Gray (552) attempted to test the hypothesis that cloze measures local redundancy rather than comprehension of major ideas. Three versions of an experimental test were prepared, an unaltered version (UA) and 2 modified versions (M1 and M2). M1 represented a 30 per cent reduction of UA as a result of function word deletion in a narrow sense. M2 contained only half as many words as UA resulting from the deletion of function words in a broad sense. Two tests were used to assess the result of the redundancy reduction achieved through the function word deletion: 1) a 32-item multiple choice test and 2) a cloze test of 50 blanks for each of the UA, M1, and M2 passages. The 180 seventh graders were randomly assigned to one of 6 conditions (UA, M1, or M2 paired with cloze or comprehension test). Using the multiple choice comprehension test, the M1 and M2 mean scores were 87 per cent and 77 per cent of the UA score, respectively. For the cloze tests, the M1 and M2 mean scores were 22 per cent and 25 per cent of the UA score, respectively.

Tuinman, Blanton, and Gray (551) analyzed response distributions in a cloze task in regard to probability of successful fill-in of a particular blank. The researchers assumed that a finite number of possible word types exists with reference to any single cloze blank, that any response to a cloze blank will be contextually/syntactically correct or incorrect, and that the words emitted for the cloze blank are representative of the corpus of words from which subjects sample. Five versions of a 300-word cloze passage were prepared; all versions deleted every fifth word, starting with the first and proceeding to the fifth word. Thus, all words were deleted once within the confines of the 5 versions. The cloze passage was preceded and followed by paragraphs of 140 and 100 words respectively. A total of 390 7th, 8th and 9th graders were randomly assigned to one version. Protocols were hand scored; the analysis considered only 51 nouns in the passage. Intercorrelations were computed among total word types, contextually/syntactically correct word types, contextually/syntactically incorrect word types, ratio of correct to incorrect word types, and proportion of correct responses. Results indicated that the more word types emitted, the smaller the probability of success for a specific closure. In the case of contextually/syntactically incorrect words, the number of word types varies closely with the number of word tokens; not many incorrect word types attracted more than 1 respondent. The authors discuss the theoretical implications of the study and suggest additional research.

Style of passage, form of passage, and reading ability were the independent variables studied by Hansell (232). For style, 3 passages were classified as good literature and 3 as poor. Three different forms of each passage were then presented to the eighth grade population utilized in the study: an original version (O); a syntactically simplified version (S); and a version simplified for vocabulary (V). S forms were simplified to reduce the number of embeddings, conjuctions, passives, negatives, questions, and imperative transformations. V forms were simplified by substituting easy words for difficult ones. Subjects' reactions to the passages were assessed in 4 ways: reading rate, subject ratings of comprehensibility on a 5-point scale, subject ratings of enjoyability, and cloze scores on a 22-item test. When passages were ranked by formula and by cloze scores, 4 of the 6 passages did not follow the results predicted by the Dale-Chall formula. Although comprehension was affected consistently across ability levels by the simplification of passages, enjoyment and reading rates were affected differentially according to ability. High ability subjects enjoyed O passages more while middle and low ability subjects preferred V and S passages respectively. O forms were read more rapidly than other forms by high ability students but more slowly than other forms by low ability subjects.

Children's concepts of language and reading were the subject of research conducted by Oliver (424). A total of 25 teacher aides asked children, ages 3 through 5, questions about letters, reading, and writing. When asked to name letters from the printed forms, 3 year olds generally were unable to do so, while 4 year olds named an average of 6 letters. Five year olds were able to name most of the letters. When asked to point to a word the aide had named, subjects performed much better. About half of the younger subjects could identify a word but not explain what a word was. Nearly all 5 year olds could identify a word, with 1/3 giving relevant explanations. Nearly all children had difficulty in giving explanations about why people write. Half of the 3 year olds, 1/3 of the 4 year olds, and only a few of the 5 year olds indicated they knew how to read. However, most who said they did not know how to read expressed interest in learning.

Simons (504) examined the hypothesis that English spelling corresponds to an underlying lexical level of representation rather than to a surface phonetic level or pronunciation and that learning to read involves learning the spelling-lexical level correspondences. Subjects were 43 grade 2 and 44 grade 3 children divided into high (Hi) and low (Lo) readers on the basis of teacher judgment and the *Cooperative Primary Reading Test*. A modified paired-associate study-test task was utilized with 2 treatments. Two treatments were used: 1) the REL treatment consisting of morphological word pairs with the same vowel spellings, and 2) the UNR treatment consisting of unrelated word pairs that shared the same vowel spelling. Subjects were presented with word pairs containing 3 REL pairs, 3 UNR pairs, and 4 filler pairs. For the total group, the prediction that REL would be superior to UNR was not upheld. There was a trend in the direction of REL superiority over UNR for Hi readers but not for Lo readers. However the difference between grade levels for REL over UNR was not significant. Thus the author concludes that the findings did not offer much support for the predictions of transformational theory about reading acquisition.

Using task analysis, Linke (341) constructed a hierarchy of graphical interpretation skills which were then checked for logical consistency by curriculum experts and then analyzed for subdivisional skills. A limited validation trial of the materials was conducted and appropriate forms selected for particular grade levels. A major validation study was then conducted with 192 Form 1 students from 11 randomly selected high schools in Melbourne, Australia. A corresponding group of 200 indigenous Form 3 students in New Guinea were also involved. Each pair of hierarchically related skills was tested for significance and power. Results indicated that the pattern of acquisition of skills was essentially the same for both groups of students, despite their different cultural backgrounds. The author felt that the findings offered cross-cultural support for the principle of hierarchical learning.

IV-9 Vocabulary and word identification

In an exploratory study, Barr (32) attempted to specify the influence of materials on learning to read. First grade children were selected and classified according to strategy and instructional materials to form 4 groups. The 4 groups consisted of the following: a group of children reading from phonics material using a sight word strategy (PS), a group reading phonics material using a phonics strategy (PP), a group reading sight word materials using a sight word strategy (SS), and 1 child reading sight word materials using a phonics strategy (SP). In December of grade 1, children were tested with 17 words which had not been introduced in either of the 2 basal series used. Seven of the test words were classified as simple in that they contained no consonant blends or vowel diphthongs and ranged from 2 to 4 letters in length. The 10 words classified as complex ranged from 3 to 5 or more letters in length. The majority of the 17 words were not responded to (mean=12.1). The frequency of correct response (mean=2.2) for the remainder was about equal to the frequency of substitution response (mean=2.4). The PP, PS, and SS groups did not differ significantly on the mean number of correct responses, substitutions, or non-responses. The SP child showed a higher number of non-responses and a lower number of correct and substitution responses than did the other groups. Children reading from the phonics material responded more frequently to simple than complex words, although strategy influenced the frequency of response to simple and complex words. The group reading from the sight-word materials responded with about equal frequency to simple and complext test words. It was noted that materials influenced the frequency of response to simple and complex words. All but 1 of the PP children showed a higher frequency of response to simple than to complex words. The findings were interpreted as suggesting that both strategy and prior experience with certain word patterns influence the frequency of response to printed words.

Hunter (265) compared spoken and written word lists to judge their relevance to and their use in 5 current grade 1 reading programs. One word list drawn from samples of children's spoken vocabularies was compiled through an interview technique in an earlier study of approximately 80 inner city black 4- to 6-year-old children. This approach produced a total of 212 high-frequency words, of which 197 were judged as standard English. The words were then compared with words included on the Dolch, Johnson, Hillerich, and Harris and Jacobson lists to determine the commonality of words and their relevance to a corpus of words obtained from 5 different beginning readers. A high degree of correspondence was found among the words from the different lists, particularly between conjunctions, prepositions, pronouns, and forms of the verbs *to have* and *to be*. Also noted was that the more numerous the words on a list, the more likely the list varied from other lists in its low frequency words, especially nouns and verb tenses.

Samuels, Begy, and Chen (486) presented a report of 2 experiments to determine the differences in word recognition strategies characteristic of more skilled and less skilled readers. In Experiment 1, 20 good and 20 poor readers in grade 4 were compared on word recognition speed and ability to generate a word when only partial clues such as first and last letters and word length were available. In Experiment 2, 20 college students and 20 fourth grade pupils were compared on word recognition speed, number and speed of partial percepts in the absence of total recognition, as well as an awareness that a recognition was incorrect. A significant difference favoring good readers was found in Experiment 1 in the ability to generate a word when given context and partial cues from the target word. More fluent readers were found to be superior to less fluent readers in speed of word recognition even though they were equal in accuracy of word recognition. Better readers were also more aware of having made a false word identification. The authors argue that superior word recognition processing strategies account for faster speed of word recognition.

Williams (585) focused on the development of word recognition skills over a 3-year period in British infant school children. Data were collected for 63 children who were tested at average intervals of 3 to 4 months over a 3-year period. Generally, reading vocabulary growth began very slowly, proceeded through a stage of rapid growth, and then tailed off to complete an S-shaped curve. By the end of the study, 15 children had reached a word recognition skill of at least 30 per cent of dictionary vocabulary or approximately a reading age of 8 years. For most children, the peak of word recognition growth occurred when the word recognition vocabulary was between 20 and 29 per cent or about 1/4 of the dictionary vocabulary. No pattern of development in phonic skills as consistent as that noted for word recognition skills was identified. When the 15 advanced readers had an average score of 38.6 per cent on the word recognition test, their average score on the *Swansea Test of Phonic Skills* was 58 of the 65 phonic elements.

Filp (174) tested the hypothesis that a hierarchy from simple to complex existed among a set of grapheme-phoneme correspondence skills. The following 8 subtests of the *Kennedy Institute Phonics Test* (KIPT) were used: nonsense word production (NP), long vowel production (LVP), short vowel production (SVP), nonsense word recognition (NR), consonant-cluster production (CCP), consonant-cluster recognition (CCR), initial letter recognition (ILR), and single letter production (SLP). The author hypothesized that the simple to complex hierarchy for 6 KIPT subtests was as follows:1) SLP, 2) ILR, 3) CCR, 4) NR, 5) CCP, and 6) NP. The LVP and SVP were not included in the hierarchy because previous research had shown non-significant coefficients of correlation between these 2 subtests and other subtests. Correlation matrices reported in earlier research were tested for goodness of fit, which was estimated by means of maximum likelihood estimation. The author concluded that the findings seemed to fit a hierarchical order, but seemed to be better for slow than for normal readers.

In an effort to determine the relative usefulness of various graphic clues in context, Smith (511) conducted a study using a modified cloze procedure with graduate students as subjects. Selections were chosen from first through eighth grade basal readers and reproduced with every seventh word deleted. Graphic clues provided were initial letter only, initial consonants only, initial consonants or cluster, initial consonants or cluster or vowel, and initial consonants or vowel and the last letter. Only exact word fill-ins were counted as correct. In grade 1 level materials, the use of context plus the initial letter resulted in 92.5 per cent and 94 per cent accuracy on 2 different passages. The use of the initial consonant or vowel plus the last letter resulted in 100 per cent accuracy. In grade 8 materials, the initial letter only resulted in 84.5 per cent accuracy, while initial consonants only resulted in 73.6 per cent accuracy. The author feels that his results suggest that a combination of context with limited graphic clues is sufficient for the decoding of the majority of unknown words which are in the reader's speaking-listening vocabulary.

Samuels, Dahl, and Archwamety (487) compared different word recognition strategies and their effect on reading. Sixty mentally retarded subjects (mean IQ 72) were trained on subskills underlying the hypothesis/test strategy of word recognition, while control subjects were given regular reading instruction. The experimental treatment was comprised of 7 specific skills, 3 of which dealt with recognition of the initial letter, and 4 of which dealt with the ability to utilize context. Each subject was subsequently tested under 5 conditions including speed of recognition (with word frequencies being varied) and word identification in context. Although no significant differences were found before training between the 2 groups on the 7 specific subskills, the experimental group after training showed an overall superiority on accuracy and latency criteria. In a second experiment, 36 of the poorest readers (*Iowa Tests of Basic Skills*) from the third grade population of one school were assigned to 4 treatment groups; their mean reading achievement was 3.05. The same procedures and methodologies as those used in the first experiment were repeated. After 7 months of training, subjects were tested for speed of word recognition and with a modified cloze test. Overall, experimental subjects outperformed controls on latency and accuracy measures; there were no significant interactions, however. The authors provide a general discussion of both experiments.

McCann and Barron (370) assessed the effect of student-conducted componential analysis on concept differentiation in a passage of social science content. Componential analysis is an anthropological procedure of identifying and classifying words in a prescribed schema to derive from the vocabulary relationships an understanding of underlying concepts. Used as subjects were 108 average and below average tenth graders who were randomly assigned to one of 3 treatment conditions within regularly scheduled classes. Subjects in the student-conducted component analysis group received three 50-minute training periods related to the application of component analysis. The second group consisted of teacher-assisted component analysis, and subjects were provided with only a brief explanation and demonstration of component analysis. The third group acted as controls and read only. In all situations, students read a 3,000-word passage on mental health that was considered to be relatively unfamiliar to them; the readability was judged to be at the eighth grade level. The outcome measure was the *Mental Health Vocabulary Relationships Test* (MHVRT), which was administered 48 hours after the conclusions of the treatment. The MHVRT consisted of 25 items designed to assess relationships of terms in the learning passage. Each item contained 4 terms, 3 of which were directly related. The students' task was to identify among the word choices the one least related to the other 3. The results of 2 orthogonal planned comparisons of mean differences on the MHVRT disclosed that both experimental groups achieved higher mean scores than did the control group.

To assess the result of synthetic and analytic decoding training in reading, Vandever and Neville (556) paired 50 educable mentally retarded with an equal number of normal children as subjects. They were assigned randomly in pairs to part-to-whole word or to whole-word teaching conditions. Children in the analytic condition learned words printed in a contrived alphabet by a whole-word method and children in the synthetic condition learned the same words by a part-to-whole method. Four lists were developed—a training list consisting of words consistent with each other in phoneme-grapheme correspondence and 3 transfer lists. Two of the transfer lists included words related to the training words either by word family or by phonetically consistent elements. The third transfer list was made up of words that differed phonetically from the training words. At the end of each teaching session, the subjects were tested in a randomly determined sequence on the training and transfer words. On all 3 transfer lists, the results favored those children who were taught under the synthetic method condition.

The data by Engel (156) were collected in a study designed to determine which letters of the alphabet are most accurately recognized within the context of a word, and which words are most accuratedly recognized as a function of letter predictability. The 40 adult subjects were divided into 2 groups and asked to identify 100 form-letter words presented tachistoscopically. Both groups were told that actual words were to be presented. One group was to respond with the word while the other was to respond with the letters of the word. One half of the words were taken from the Thorndike-Lorge list of the 500 most frequent words; the other half, from words occurring less than once per 1,000,000 on the Thorndike-Lorge list. Words were also selected so that each set would contain as nearly equal letter probability distributions as possible. Each letter was categorized as being High or Low according to 1) its simple probability of occurrence, 2) its probability of occurrence given the letter or blank space to its left, and 3) its probability of occurrence given the letter to its right. To determine if accuracy of reporting a whole word was related to letter predictability, an aggregate measure of the overall predictability of all 4 letters in each stimulus word was developed. Generally, all observers tended to decide on what word had been presented. When a decision on a word was not clear cut, all tended to report letters. The coefficient of correlation obtained between recognition accuracy and predictability was .34 for the high frequency words and .44 for the low frequency words when the aggregate predictability score was each word's simple probability count plus its score for conditional probability (left). When the aggregate predictability score was the sum of simple letter predictability and conditional predictability (right), the coefficients between accuracy and predictability were .18 for high frequency words and .24 for low frequency ones. Letters with a high probability of being the last letter of a word tended to be more accurately recognized than letters with low probabilities of being last letters. Results indicated that letter predictability influences both accurate recognition of a word as a whole and accurate recognition of particular letters in a word.

Using a computational scheme involving simple rank-order mathematics, Coleman (101) described a method of creating short and easy-to-read sentences and combined these sentences with either cartoon or film presentations. The cartoon or film format was used to have the student acquire a reading vocabulary, extract meaning of simple stories, and induce words from context by incidental learning of highly motivational materials. The method involved the rank-ordering and linguistic classification of high frequency words according to a weighting system for producing small sets of words. In turn, these words are then manipulated linguistically and mathematically to generate a larger variety of idiomatic or colloquial expressions. Twenty words were identified form a list of 1,000 high frequency words; these were, in turn, rank-ordered as 1-word sentences by 43 graduate student judges. Similarly, 100 most frequently used words were identified and combined into all the possible 2-word sentences for a toal of 397 two-word sentences. These words were then rated as to their productivity by student judges. Based on these 2 optimum word lists, larger sentences could be generated through a process of linguistic classification of the words according to their function such as modal auxiliary, content verb, verb particle, and the like so that word combinations could readily be formed to produce actual sentences.

The effects of phonic blend training on word decoding were compared in 2 groups of 4 year olds by Fox and Routh (184). One group was proficient at segmenting syllables into individual phonemes while the other group did not have this proficiency. Subjects were 20 boys and 20 girls obtained from day care centers and from telephone contacts with parents. Two 30-minute sessions were carried out with each child. In the first session, a matching-to-sample test procedure was followed to confirm the child's ability to discriminate among letter-like forms to be used later. This was followed by left-to-right reading training in which the first and last letter in a 2-letter sequence were identified for the child and then he was asked to point and do the same with 6 different 2-letter words. Children were then randomly selected to receive phonic blending training or not. In this procedure, subjects were required to blend 20 words by combining 2 sounds into each. The experimenter pronounced and blended the 2 sounds for the first 5 words and then was asked to produce a word when given the 2 sounds separately. Following this, children were taught to associate each of 5 letter-like forms with a spoken sound. Two word learning tasks followed the letter-sound training. In the second session, vocabulary and segmenting tasks were given. Children proficient at phonemic analysis performed better on both lists. For children who were proficient segmenters, blending training appeared to facilitate the learning of the second list given. Children who were not proficient at segmenting did not benefit from phonic blend training.

In a report to 2 experiments, Travers (549) forced serial processing by displaying words—1 letter or letter cluster at a time—and tested the effects of segment size and temporal order variation. In Experiment I, letters within words were shown with varying degrees of temporal overlap; some words were shown 1 letter at a time, some 2 letters at a time, some 3 letters, and some as wholes. For half of the words, the displayed segments were followed immediately by a mask; for the other half, no mask was used. Each of the 10 subjects identified a total of 200 words, 25 in each of the 8 experimental conditions. In the masked condition, only 33.5 per cent of words presented 1 letter at a time were identified; 84.4 per cent words displayed as wholes were identified.

In the unmasked conditions, words displayed as wholes were recognized no better than words displayed 1 letter at time. When a mask was present, words were identified more accurately as the number of letters available for processing at any one time grew, even when increases in letter span were associated with decrease in the processing time for the word as a whole. In Experiment II, subjects were shown words 1 letter at a time, with and without masks following each letter. Some words were shown in normal positions and in temporal order corresponding to their left-right spatial sequence; others were shown with letters in normal position but in random temporal order. All words used were 3 to 5 letters long. A total of 288 words were identified by subjects, 72 of the words had masks and 216 did not. Without a mask, 3- and 4-letter words were identified with 80.5 per cent average accuracy even when displayed with letters in random order. With a mask present, 27.7 per cent of randomly ordered 3- and 4-letter words were identified. Unmasked words presented in normal order had a very high level of accurate identification. When masked words were presented in normal order, the level of correct identification was 38 per cent. The author concluded that the study confirmed the expectation that icomic memory would preserve input letters in spatial arrangement, despite random temporal order of input. The results were interpreted as supporting evidence that skilled readers tend to process letters within words in parallel.

In one study, the generative model of learning was applied to the study of how fifth and sixth graders comprehend words and sentences when they are reading and listening. Wittrock, Marks, and Doctorow (588) hypothesized that familiar stories, in contrast to unfamiliar stories, facilitated the learners' generation of meaning for low-frequency, undefined words. The *SRA Reading Placement* and *Listening Skills Tests* were used to determine each pupil's reading level as high, middle, or low. High and low-word frequency versions of stories were constructed by substituting comparable nouns, adjectives, verbs, and adverbs of higher or lower frequency for 15 per cent of the words in the original stories. Children were randomly assigned within sex and reading ability to a high-word frequency or a low-word reading or listening condition. Two trials per learner were given. A 10-item multiple choice comprehension test was administered between learning Trials 1 and 2. After Trial 2, a multiple choice vocabulary test over the low-frequency words appearing in the stories was given. One week following the treatments, a cloze test designed to assess retention was administered. Stories, comprehension tests, and post tests differed across reading ability levels. The hypothesis was supported across the 3 levels of reading ability, 3 stories and tests, 4 elementary schools, and 2 modes of presentation. Familiar stories facilitated the learning and retention of new vocabulary words. The authors concluded that the data were consistent with the generative model.

In their publication, Ohnmacht and Ohnmacht (423) investigated good and poor readers to find out whether they were differentially sensitive to delay prior to recall or to taxonomic shifts at the end of free recall lists. A free-recall paradigm was utilized with 0-second and 30-second delay. Subjects listened to tape recorded words presented at a 2-second rate and were to repeat each word immediately after hearing it. At the end of the list of words presented, a bell sounded and subjects in the 0-second delay condition began recall. In the 30-second delay condition, subjects read numbers for 30 seconds and then began recall. Subjects were given 2 lists, experimental and control. The control list had 20-body part words; the experimental list utilized 15 of the body part words and 5 animal names. Poor readers performed better in both the delay and no-delay conditions than on the control lists. Good readers performance did not vary much across lists but appeared to do somewhat better in the delay condition than in the no-delay condition. Results favored good over poor readers for the control condition but indicated no such effect for the experimental list.

Research into the influence of noise and 2 methods of object presentation on the rate with which kindergarten children learned 4 sight words was the subject of one investigation. Ollila and Chamberlain (425) randomly assigned their 120 subjects to 4 groups of girls and 4 groups of boys. Each group was assigned to either a noise (N) or no noise (nN) condition and to 2 methods of presentation: word-alone (W) and word-object (W-O). Subjects met individually with the experimenter and received pretesting, pretraining, and training to criterion for the 4 words. Criterion was defined as 2 successive trials within which all 4 stimulus words were responded to correctly. The mean number of trials to criterion was the dependent variable. WnN children were presented with the words and given the correct response if they did not know it. W-OnN subjects were presented with the word and the object if they did not know a word upon presentation. WN and W-ON subjects received the same treatments as above but with a tape recording of classroom noise playing. The only significant comparison found was that favoring WnN girls over W-ON girls. The rate of learning the 4 words was not facilitated by the word-object method of presentation. No sex differences were observed.

IV-10 Factors in interpretation

Wolfe and Shuman (589) explored, from a qualitative perspective, the responses of high school students to 2 poems. Tenth and twelfth graders in high ability English classes read 2 poems. Each subject was asked to respond freely to the literal sense of the poems. In addition, subjects were asked 7 questions about each poem dealing with their appreciation of poetry in general and the 2 poems used in the study, specific things about the poems they did not like, technical knowledge of devices used in poetry, pleasure reading of poetry, unknown vocabulary words in the 2 poems, and author's purpose in the 2 poems. All responses were then judged by 2 English teachers and the examiners according to Richard's criteria for reading and understanding poetry. In terms of subjects' ability to get the literal sense of the 2 poems, 48 accurate and 35 inaccurate responses were made by the total group. Tenth graders made 23 inaccurate and 25 accurate responses to the poems, while twelfth graders made 38 accurate and 10 inaccurate responses. Preferences for one or the other of the poems related primarily to the feeling incited by the poem rather than the poet's craftsmanship. While the twelfth graders listed a broader range of technical devices used in poetry, both groups cited many terms that were non-technical in nature. More students claimed to like poetry than those who claimed not to like poetry. Reasons for not liking poetry generally centered around poetry being "boring" and "difficult to understand." Many words in both poems were cited by subjects as words they had difficulty with, indicating that the vocabulary of poetry creates reading problems for students. Only 2 students in the sample failed to recognize the author's purpose in each poem, although responses varied qualitatively a great deal. The authors provide a discussion of the practical implications of the study.

In a series of 4 studies, Dulin and Greenewald (144) investigated the response of readers to 3 specific propaganda devices: loaded words, name-calling, and borrowed prestige/borrowed dislike. Ten simulated newspaper interviews were written, each followed by 5-point response scales for the reader reaction to the person being interviewed. The first study investigated the response to loaded words by substituting 5 negative or 5 positive words for "said" in each interview. Thus 20 articles were used, a positive and a negative form of each of the original 10 interviews. Each subject received 10 articles to read, 5 of each type. Subjects for this first study included 127 adults as well as high school and junior high students. Each subject's 5 scale-scores for each article were summed and the total-group level of mean positive responses to each article-version was computed. Mean levels were higher for each group of subjects to the positive said-substitute versions than to the negative said-substitute ones. Similar procedures were followed in the other 3 studies. Study 2 utilized either 3 positive or 3 negative adverbs inserted in each article. Study 3 investigated name-calling by inserting a positive or negative noun followed by an adjective clause describing the noun. Study 4 investigated borrowed prestige/borrowed dislike. In each study, the positive-tone articles consistently drew higher mean levels of positive reader response. The authors feel that the findings clearly indicate the propaganda devices do affect readers.

Coomber (105) researched the ability of college students to perceive the main ideas of paragraphs. The 242 entering freshmen used as subjects were divided into the following 3 groups on the basis of scores on the *Cooperative English Test*: Reading Comprehension—good readers, 70-99 percentile (N = 95); average readers' 40-69 percentile (N = 81); below average readers, 0-39 percentile (N = 66). Seven non-fiction selections—each containing 5 to 13 paragraphs—were taken from a textbook of reading improvement exercises. The readability levels ranged from grade 9 through grade 12. Multiple choice requiring the identification of the main idea of selected paragraphs followed each selection. Each paragraph referred to in the questions contained a topic sentence. A total of 40 questions were asked. Mean numbers of correct responses were computed for each subject, for each proficiency group, and for the total group. Good readers answered a mean number of 26.70 questions correctly; average readers, 23.56; and below average readers, 20.97. The author points out that even good readers frequently fail to perceive the main ideas in materials.

An exploratory investigation into why pupils ignore written directions and explanations in mathematics was presented by Byrne and Mason (71). A mathematics textbook page with a discrepancy between the illustration, the text, and the answers was given to 594 fourth-grade pupils; and the results were scored by their teachers. In their scorings, 5 teachers expected pupils to respond to the illustration, 4 teachers ignored the illustration, 6 teachers accepted a response to either the text or the illustration, 4 teachers expected a response to the illustration when specified and to the numerical information in the text when it differed with the illustration, and 4 teachers were not clear. Almost 10 per cent of the responses were marked wrong by some teachers when others gave credit for the same response. Thirty-three responses were logical but not in the expected form and were marked wrong.

Klein, Klein, and Vigoda (301) examined the extent to which high school students use context in word identification decisions. In addition they looked into the relationship between reading competence and use of context in word identification decisions. The 144 high school subjects were presented with four 200-word prose passages written at high school readability level. A contest form and a random form were developed for each passage. The latter was constructed by randomly ordering the 200 words. All 8 passages were prepared by deleting punctuation and adding a space after each letter with no additional spaces between words. Each line began and ended with a complete word. Each subject was given a test booklet containing 2 random and 2 context passages. Half the booklets were in an RRCC order and half in a CCRR order. Subjects were required to draw slashes between words as quickly as possible. A 90-second time interval was allowed for each trial with a 30-second inter-trial interval. For each subject, the mean number of correct words for the 2 random and the 2 context passages were calculated. Additionally, teachers were asked to rate students on a 5-point scale in terms of reading skill. Otis IQ scores were available on 97 students and the cooperative *English Test for Reading Comprehension* scores, including vocabulary and rate subtest scores, were available for 105 students. The data supported a relationship between the effective use of contextual constraints in written material and superior reading performance.

Peters, Peters, and Kaufman (438) investigated the relationship between reading skills in content areas and total reading achievement. All eighth graders in the study were administered the *Sequential Test of Educational Progress*. Samples of reading material were drawn from math, English, history, and science content materials. A checklist of the comprehension skills necessary to reading the content was developed by the subjects' teachers. Once the skills were identified, content teachers then developed 135 questions covering the skills in all content areas. Across all content areas, 17 comprehension subskills were measured; some subskills, such as "critical reading," overlapped among content areas. The content area test was administered to all subjects and correlated with STEP performance. The STEP correlated with content portions of the new test: .712 with history, .734 with English, .635 with science, and .619 with math. Four specific skills correlated highly with the STEP: English details, English critical reading, history critical reading, and history concepts. The skills of critical reading and details in science, however, had low correlations with the STEP.

McLeod (378) studied the feasibility of developing a multilingual reading comprehension test using the cloze procedure. A test consisting of 6 short stories was developed and was produced in English, French, German, Czech, and Polish. Every eighth word was deleted. In each location, between 30 and 50 children at 4 consecutive grade levels from a single school were tested. Referent groups of fluent readers were also tested. These latter groups generally consisted of college, gymnasium, or lycee students. A total of 25 of the children's protocols at each level were randomly selected except in the case of 4 classes where fewer than 25 completed 4 pages of the test; in those instances, protocols of all children completing the first 4 pages were used. Among fluent readers, the protocols of the 25 highest scorers were selected. An Uncertainty Reduction Index (URI) for each subject was divided by a test estimate of an excellent reader (URImax) to produce a relative uncertainty reduction index (RURI). Mean RURI's for each linguistic group were calculated and presented according to grade levels. An analysis of variance of redundancies in the various languages, as estimated by fluent readers, showed no significant differences between the redundancies of the 5 languages. Results further suggested that the method was valid and reliable and has potential for the assessment of bilinguality of reading comprehension.

A report on the effect of using imagery instructions with text material was presented by Kulhavy and Swenson (316). From grades 5 and 6, 119 children served as subjects. Two control groups and 2 experimental groups were formed. Experimentals received to read a 20-paragraph prose passage. Controls read only text or text-related questions. Image-instructed experimentals were told to form mental pictures of the events and activities in each paragraph prior to constructing their response to questions covering each paragraph. Non-instructed subjects were told to read the material and to answer the questions correctly. Time to read was recorded, and subjects received either a first form of the test followed immediately by the second form or else an unrelated placebo test for the delayed recall group. Tests assessed both verbatim and semantic recall of questions seen during the initial reading. One week later, all subjects received both forms of the test. Controls were given the tests at both immediate and delay sessions. When pooled delay scores were analyzed, there was a superiority for learners receiving imagery instructions. Instructed children also recalled more semantic than verbatim test items.

Haviland and Clark (244) investigated a model for sentence learning with college subjects. In Experiment I, subjects were presented with 68 context-target pairs, 34 of which were direct antecedent pairs and

34 of which were indirect antecedent pairs. An example of a direct antecedent pair is:

(1) We got some beer out of the trunk.
The beer was warm.

The indirect antecedent pair contained the same target sentence, but with a slightly changed context sentence:

(2) We checked the picnic supplies.
The beer was warm.

Subjects were given instruction to read both sentences, then press a button when they understood the meaning of the second sentence. Thus, latencies for understanding the target sentence were used to measure sentence comprehension. Results indicated that comprehension time of the target sentences was significantly faster in the direct antecedent pair condition. Additional experiments varied the referent antecedents, using adverbs and other parts of speech rather than only nouns. Results were replicated.

Klein (302) explored the extent to which learners at selected grades were capable of understanding certain logical forms. Three assertion forms were tested—conditional, disjunctive, and conjunctive. At each of grades 4, 8, and 12, there were 120 subjects tested. In addition to the logical forms test, a 15 per cent random sampling of subjects were used at each grade level and were individually administered 3 sets of tasks designed to test for concrete operations abilities: Class Inclusions, Some-All, and Combinatorial Reasoning. *Lunzer's Analogies Test* was also administered. Of the 3 assertion forms, students appeared able to infer to conditionals more effectively than to conjunctives or disjunctives in logical equivalency operations. Poorest inferential performances were made on conjunctive assertions. Subjects appeared to infer to assertions with minimal negation more effectively than to assertions with 2 or more negatives. No overall significant sex differences were noted.

In another report, Klein, Klein, and Hildum (300) explored the role of phrase and sentence information in the processing of written language. Subjects for the first of 3 experiments were 192 undergraduates in an introductory psychology course. Six themed passages, averaging 161.5 words, were developed. For each passage, 4 word boundary forms were generated: an articulatory phrase form (AP), an articulatory control form (AC), a constituent phrase form (CP), and a constituent control form (CC). In the AP form, breaks occurred between articulatory phrases; in the AC form, the same number of breaks as in the AP form occurred, but these were placed randomly. The mean number of words between breaks was 4.9. In the CP form, a structural tree diagram was obtained for each sentence and the most prominent nodes were chosen as breakpoints, with the number of breaks about equal to the number in the AP forms. In the CC forms, the same distribution of breaks occurred as in the CP form, but none of the breaks overlapped with either the AP or the CP breaks. The mean number of words between breaks in the CP and CC forms was 4.8. The forms were then placed in a format in which all words were run together with 1 space after each letter. Breaks were marked by 2 hyphens and a space between. Two conditions, articulatory and constituent, were established with 96 subjects in each condition. Each subject received 6 trials. In the articulatory condition, 3 trials were with AP forms and 3 with AC; in the constituent condition, 3 trials were with CP forms and 3 with CC. Subjects were to draw slashes between words with accuracy emphasized over speed. Data were in mean number of correct words for the phrase and the control trials for each subject. Results indicated that phrase cues can be utilized as contextual information. In the second experiment, 48 volunteer undergraduates served as subjects. Two forms of the 6 passages used in the first experiment were generated. In the sentence form, breaks between sentences were marked, while on the control form, breaks occurred in the midst of sentences. Mean scores for the sentence forms were slightly higher than for the control forms. In the final experiment, 64 undergraduates were used, and 4 passages, averaging 179 words in length were developed. For each passage, a sentence form and a control form were developed. On the sentence form, sentence breaks were marked by 2 hyphens and an extra space while breaks came in the midst of sentences in the control form. Performance was superior for the sentence forms. The authors feel that their findings support the importance of organizational structure in the performance of language analysis.

Thomas and Augstein (538) used the reading recorder in an experiment to record the reading patterns of subjects while reading for different comprehension purposes. The reading recorder is a mechanical device that produces a graphic record that displays the hesitations, backtracking, and skimming and other behaviors of a person during the reading of a text. In the experiment, 2 matched groups of 30 subjects read a difficult and unfamiliar article of 400 lines in length on the reading recorder. One group read the article with the given purpose of taking a multiple choice test. The other group was given the purpose of a summary after reading. After the event, each group was asked to do both tasks. The results showed that 19 of those expected to write a summary successfully did so, and 7 subjects of those expected to answer the multiple choice test also succeeded on the summary criterion. Twenty-five of those who read to summarize were successful on the multiple choice test as were 21 of those who prepared themselves for it. On the retest 2 weeks later, successful summarizers retained much more of the multiple choice knowledge than equivalent unsuccessful summarizers. The graphic record disclosed that sentences which were syntactically simple were understood during 1 smooth reading, but as syntactic complexity increases, the smooth reading became associated with incomplete understanding. In the report, the authors described the various types of reading patterns recorded in terms of tactics and strategies in reading.

One study proposed to examine the effect of interest on reading comprehension among good, average, and poor readers and across grades 4, 6, 8, and 11. One passage from each grade level in each of 7 general interest areas was selected. Passages ranged from 500 to 2,000 words in length, depending upon grade level. The 524 subjects came from 4 schools and represented 24 randomly selected students from each of the 3 ability groups at each grade level. Achievement test scores were used as the basis for determining ability. Several weeks prior to reading the passages, Vaughan (558) had subjects rank the titles and a 2-sentence summary of each passage in the order in which they would most like to read them. Each subject was then presented with his high and low choice to read. Comprehension was assessed by 50-item post reading cloze tests. A 2-factor randomized design revealed that the effect of interest on comprehension differed across ability groups. The comprehension of less able readers was significantly more affected by the variance in their interest in what they read than was the comprehension of better readers. A Tukey Test for Post Hoc Comparisons showed the difference between good and average readers, good and poor readers, and average and poor readers were all significant at the .01 level. The relationship between interest and comprehension did not vary significantly across grade levels. A further analysis of the data indicated that the variance among the ability groups was significant only at grade 4 level.

Grey (212) examined the literal, inferential, evaluative, and appreciative levels of comprehension with sixth graders as well as their imagery for sentences. Subjects in the study were reading at the fourth, fifth, and sixth grade levels according to their oral reading performance on a set of graded passages. Each subject read a passage at the appropriate grade level, then answered 6 literal questions and 16 questions at the 3 higher levels of comprehension. In terms of assessing higher level comprehension, any response in which an attempt was made to answer the question was counted as correct. At another testing session, a random selection of subjects were presented 10 statements; each subject was provided with 10 sets of 10 questions—each to be used in responding to the imagery statements. Results indicated no differences in number of responses to higher level comprehension questions dependent upon subjects' reading levels; similar findings were revealed for imagery responses. Measured performance on higher level comprehension questions was better at all reading levels than performance on literal questions. Additional findings are presented.

Third and fourth graders were used by Lesgold, McCormick, and Golinkoff (335) in 2 experiments designed to determine the effects of passage illustration training on reading comprehension. The training procedure emphasized close correspondence between passage content and the content of subject-generated mental or physical pictures illustrating that passage. More specifically, the training procedure sought to coordinate verbal and pictorial representations by having the subjects read passages, illustrate them with stick-figure cartoons, and use the illustrations as prompts in recalling passage content. In experiment 1, 10 third graders and 22 fourth graders were selected as subjects from a multi-racial inner-city school; 75 per cent of these subjects were below grade level in reading achievement. A pretest-post test design was used. Two pretests were given: Form F of the *Metropolitan Achievement Test* (MAT) was given 23 days before the training period and a paraphrase recall test 1 day before. Subjects were then split into 2 groups with an equal number of each grade and sex and with approximately equal pretest means. After a 27-day period during which 12 training sessions were conducted, 3 post tests were given. The MAT was administered 1 day after training. The next day, 2 paraphrase recall tests were given, the first without and the second with instructions to subjects to keep in mind a mental picture of passage content as they read. Treatments were given to groups of 5 or 6. The cartoon instructional treatment involved reading stories and then illustrating their content. Sessions lasted about 25 minutes. The second experiment was a replication with modifications. The results showed in general that without this imagery training, imagery instructions did not improve performance on either a standardized reading comprehension test or a paraphrase prose recall procedure. After extended training in drawing adequate comic illustrations of prose passages read, the subjects gained on the paraphrased recall task, but only when explicit imagery instructions were given with the task. The imagery training did not affect the standardized test performance, explicit imagery instruction notwithstanding.

Klein (299) analyzed the findings of 3 experiments studying the effects of different secondary tasks on context utilization. In the first experiment, the visual clarity of the materials was varied; the second used an interfering motor task; and the third, a digit recall task. In the first experiment, 68 undergraduate students served as subjects; in experiment 2, 64 volunteers were used of whom 26 were graduate students, 8 were undergraduates, and 30 were college bound high school students; 96 undergraduate students participating for course credit were used in experiment 3. Four college level difficulty prose passages, each about 150 words long, were selected and altered so that no proper names, capitalized words, or symbols appeared. All punctuation except commas and periods was omitted. Passages were then prepared by omitting punctuation and by printing each passage with a space after every letter but no additional spaces between words. These were termed coherent passages. For each coherent passage, a random form was developed by randomly ordering the words. In the first experiment, 2 levels of printed clarity were used, a clear condition (original) and a third carbon copy. In the second experiment, clear materials were used, but an asterisk was typed in the space above every fifth letter. On trials when performance was to be slowed down, the asterisks were to be circled. In experiment 3, subjects were to remember 4-digit numbers called out by the experimenter as they read. In all experiments, subjects were to draw slashes between words. Mean number of words per minute correctly identified was the means of scoring. For experiment 1, both clarity and coherence affected performance. The random/unclear condition was significantly slower than the random/clear condition. A greater number of words per minute was identified in the coherent than in the random passages, demonstrating the use of contextual information. In experiment 2, circling slowed down performance significantly. In addition, the random/circle condition was significantly slower than the random/control condition. There were also a significantly greater number of words per minute for the coherent passages than for the random passages. The authors suggest that slowing performance rate can reduce context utilization. In experiment 3, increased demands of the secondary task, recalling digits, was shown to reduce context utilization even though performance rate was not reduced.

Malley (357) compared results on a criterion-referenced measure, *The Prescriptive Reading Inventory*, with 2 norm-referenced measures and a *Teacher Rating Scale* to determine whether information received on the criterion-referenced test was as accurate as on the others. The norm-referenced tests were the *California Achievement Test* and the *Wide Range Achievement Test*. Subjects were 47 boys and 40 girls in grade 3 of a rural school—none of whom were emotionally disturbed, had uncorrected auditory or visual deficiencies, or had an IQ below 60. Results obtained were compared through the use of a multitrait-multimethod matrix. The measures were broken down into 4 traits: Word Recognition skills, Literal Comprehension, Interpretive Comprehension, and Total Reading. The data revealed high intercorrelation coefficients for each of the traits except Literal Comprehension. However, the data did not support the presence of discriminant validity. No evidence was found to support the notion that any of the tests were capable of measuring specific reading skills.

The influence of background noise on proofreading and comprehension was investigated by Weinstein (578). College subjects were assigned to conditions of background and no background noise. Subjects were to proofread selections without the option of looking ahead or back in text. Two types of errors existed in the experimental text: contextual errors including errors in grammar, missing words, and inappropriate words; and non-contextual errors including misspellings and typographical errors. Two comprehension tests were administered emphasizing literal and conceptual understanding of the experimental passages; subjects were not told beforehand of the test. Analyses of covariance indicated that background noise brought about poorer identification of contextual errors but not spelling and typographical errors. Recall of passage content was unaffected by noise. Noise conditions further tended to slow subjects' performance. Results are discussed in terms of available feedback and strategies used to cope with noise.

IV-11 Oral reading

Forester (180) reported a naturalistic observational study of reading acquisition. Ten sessions of about 90 minutes each constituted the observational periods in a combination kindergarten-grade 1 classroom. Of these, 3 sessions were with kindergarten children. A written record was kept of the interactions between teacher and pupils. Observations were further augmented by notations made during oral readings in class and tape recordings by 3 children selected by the teacher and designated as top, middle, and poorest readers among the grade 1 pupils. A miscue analysis procedure was utilized to analyze the oral reading of the 3 pupils during special sessions and of groups of children during regular classwork. A number of observed behavior patterns are reported in the write-up of the study. Included among these are the following: 1) The same wrong answer or one similar to it is frequently given several times in succession by different children or even the same child; 2) the intended purpose of an exercise does not necessarily guide the child in working out answers; 3) explanations provided by the teacher about such concepts as words and sentences frequently fail to elicit a response or sign of recognition; and 4) errors during oral reading often involve conversion of the text into a language pattern more meaningful in terms of the child's oral language. The author feels that her data seem to confirm a similarity between the processes of learning oral language and learning to read.

Eagan (146) attempted to determine whether the misuse of the pause in oral reading was related to the silent or oral reading comprehension abilities of young children. Subjects were 12 above-average, 12 average, and 12 below-average readers from each of grades 2 and 3. They came from 4 schools. Sex distribution was equal throughout each of the 6 cells of 12 children each that were formed. Silent reading comprehension was assessed by means of the *Gates-MacGinitie Silent Reading Test*. Oral reading was determined by the *Gilmore Oral Reading Test*. In addition, the *Lorge-Thorndike Intelligence Test*, Level 2, the Auditory Memory Span subtests of the WISC, and the Visual Memory Span subtest of the *Detroit Test of Learning Aptitudes* were given. An investigator-developed word recognition test, including all words occurring in the Gilmore, Form C, was also used. The percentage of while reading orally was measured in several ways. The percentage of time spent pausing while reading orally was measured in several ways. The percentage of time spent pausing was able to discriminate between silent reading comprehension groups of varying degrees of ability. All children tended to resist a disruption within a syntactic constituent. The number of pauses made within syntactic constituents appeared to depend more on the semantic and syntactic difficulty of the reading material than on word recognition abilities. No evidence was found to support a relationship between oral reading comprehension scores and any of the pausing variables assessed. No relationship between oral reading comprehension and silent reading comprehension scores was noted.

The research reported by Watson and Clay (574) attempted to discover whether the oral reading errors made by Third-Form students in New Zealand provided evidence of the ways in which syntactic and semantic cues were used. The mean age of the 232 students was 13-9. Each subject read the *Neale Analysis of Reading Ability* and a record of all they said and did as they read was recorded. Scores on the Neale Analysis were compared with those on the *Progressive Achievement Tests* (PAT). Using biserial correlation, a coefficient of .49 was obtained between oral reading and PAT scores. For the group as a whole, Error Rate was found to be 1 error in 22 running or 1.22. A gradation of ability throughout the total Third-Form was noted with marked differences in Error Rate between Low, Low Middle, Upper Middle, and High groups of readers. The group read with 95.5 per cent accuracy. Average oral reading rate was 121.8 correct words per minute with a range from 29 to 195. Subjects relied strongly on their knowledge of language structure in responding to the text. Low reading groups either did not use strategies which used information about sentence structure effectively or they appeared to have less successful strategies which precluded the use of grammatical constraints. Good readers demonstrated the ability to use semantic information effectively, while readers in the Low group did not. An analysis of acceptable error tallies indicated that students were more often able to conform to grammatical constraints than to anticipate the precise meaning of the text. Text difficulty effected the syntactic and semantic acceptability of the errors made.

The purpose of the study of Miller (388) was to note the effect that an unknown word has on oral reading at grade 2 level. In particular, increased probability of error on words in close proximity to an unknown word was examined as well as numbers of errors before and after different types of unknown words. The 40 subjects came from 2 classrooms in 2 lower-middleclass, semi-rural schools and were randomly assigned to the experimental group (EG) or the standardization group (SG). Two versions of a story were prepared—an unmodified version (UV) and a modified version (MV) in which about 5 per cent of the words were changed to unknown words. Word modifications were made on 2 bases: 1) type of modification, and 2) grammatical position of modification—noun, verb, or modifier. Each subject read the story orally, and the taped protocol was scored by 3 judges. The SG read only the UV version of the story. The EG was divided into 2 groups of 10. EG1 read the original version of the text and after a 1-week delay, read the modified version. EG2 read the 2 texts in inverted order. Errors were classified into omissions, additions, substitutions, and repetitions. Errors made by the EG on surrounding positions accounted for slightly over half of the total errors; for the SG, the errors in the surrounding positions accounted for less than 1/3 of the total errors. More errors were made on the modified than on the unmodified versions. There were no significant differences in the number of errors surrounding unknown nouns, verbs, and modifiers. No significant differences in the number of errors surrounding unknown words of the various types were observed. The author concluded that the data supported the notion that a higher incidence of oral reading errors is associated with close proximity to unknown words.

Recht (459) analyzed the successfully corrected oral reading miscues made by 47 children in grades 2, 3, 4, and 6. Each grade level group contained children with high, medium, and low reading abilities. Each child was asked to read aloud a passage of about 250 words and then was given a cloze comprehension test over it. Successful corrections were compared with a child's comprehension, grade level, ability, and total number of miscues. Forty-two categories of corrected miscues were devised. Six of these accounted for 41.36 per cent of the total number of corrected miscues and included miscues which were partially acceptable semantically and syntactically, with variations in graphophonic characteristics.

Lucas and Singer (346) administered the *Gates-McKillop Reading Test*, *The Illinois Test of Psycholinguistic Abilities*, and the *Children's Apperception Test* to Mexican-American elementary school subjects in an effort to assess the degree to which dialect interferes with oral reading ability. In addition, a Language Background Scale was used to rate degree of bilingualism in the home. Results indicated, at only the third grade level, a significant positive relationship between syntactic ability and oral reading. The findings supported the contention that dialect interferes with oral reading on a syntactical level rather than a phonological level.

In a semi-case study format, Lipton (342) gave sample oral reading behaviors of 6 children with emotional problems and then analyzed their miscues within a psycholinguistic-psychodynamic frame of reference. From his analysis, the author suggest strategies in the classroom and clinic.

Rowell (478) attempted to obtain objective data concerning the relationship between silent and oral reading comprehension as assessed by the Spache *Diagnostic Reading Scales.* Two each of rural, urban, and suburban schools were utilized in the study. One school in each pair represented a higher and one a lower socioeconomic level. An equal sex ratio was represented at each of grade levels 3 and 5. Oral reading comprehension scores of both third and fifth graders were significantly higher than their silent reading comprehension scores. For urban and suburban pupils and for boys, oral reading comprehension scores were significantly higher than silent reading comprehension scores. For girls and for rural pupils, no significant differences were found. No significant differences were noted between silent and oral comprehension scores among children from varying socioeconomic levels. Oral reading comprehension scores for pupils from higher socioeconomic levels were significantly higher than silent reading scores.

A study was undertaken by Eberwein (148) to ascertain whether unknown words pronounced by a teacher can be recalled by students after the words were identified. The Oral Reading Paragraphs of the *Gates-McKillop Reading Diagnostic Tests* were used as the test selection for 41 fourth grade subjects from a rural, Midwestern community. Forty-five minutes after an oral reading performance by each subject, a cloze test test was adminstered on the passages that were read orally. A comparison was made between unfamiliar words pronounced by the teacher during an oral reading rendition and the word errors in the cloze performance for each subject. In general, there were students who were unable to recall the words in the cloze test that were pronounced by the teacher. Fifty to 100 per cent of incorrect cloze test words of the subjects included words that were identified during the oral reading performance. As the grade level of the material increased, the per cent of words remembered decreased.

College age dyslexics and normal readers were studied by Jack and Hebert (270) regarding their reading ability under conditions of direct and delayed auditory feedback. Dyslexics were screened by the college counseling office and displayed average to high verbal ability, tendency toward making reversals with letters, and reported that they had difficulties in reading. All subjects were administered the *Minnesota Test for Differential Diagnosis of Aphasia.* All subjects were further given a passage to read under direct and delayed (120 msecs.) auditory feedback conditions. Criteria for scoring errors included vocalized stutter, slowing of speech, monotone voice, elongated pauses, added words, omitted words, mispronounced and repeated words. Only the Visuomotor and Writing Disturbances subtest from the MTDDA differentiated the 2 groups. Further, dyslexics' performance was significantly poorer under the delayed auditory feedback conditions on the experimental passage reading task.

Goodman (205) examined the influence of the peripheral visual field on oral reading. Subjects were pupils at grades 2, 4, 6, 8, and 10. At each grade level, 3 or 4 different proficiency levels were included. Each group read a story appropriately difficult for them. The peripheral field was defined as the line in which a word occurs and the 2 lines above and below. It was found that all readers produced responses which matched words graphically in the visual peripheral field. Older readers and groups of higher proficiency readers tended to show a higher percentage of such responses. However, because miscues per hundred words dropped with increased proficiency, the actual frequency of peripheral field miscues declined at the same time that percentage increased.

IV-12 Rate of reading

Coke (97) studied the effect of different reading strategies on word matching tasks with paid high school subjects. A total of 16 experimental and 8 trial reading passages were identified; half were rated with the Flesch Reading Ease Score as "easy" and half were rated as "difficult." Two target lists of 3 words each were constructed for each passage—one containing words identical to those in the passage, and the other containing synonyms. Each reader was assigned to either a search reading task or to a memory reading task. All readers were given the target lists immediately after reading and told to check the word or words that did *not* match any word in the passage. All passages were read by all readers. Easy texts were read faster than difficult texts, and there was no indication that the word matching task affected reading rate in the memory reading condition. Passage difficulty made no difference on rate in the search condition. Readers in both conditions did equally well on classifying identical words from easy texts, but search readers performed better in this task with difficult texts. Overall, when word matching was attempted as the reader read, easy texts were read no faster than difficult texts.

Sailor and Ball (485) examined the separate effects of reading rate and peripheral vision training on speed of reading and reading comprehension. All subjects received a total of more than 15 hours of rate training, using the EDL Controlled Reader, SRA Reading

Accelerator, and the Craig Reader. Experimental subjects received an additional 2.25 hours of peripheral vision training. Data analyses of post test effects indicated that comprehension was unaffected by rate or peripheral vision training. Reading speed was significantly improved by rate training, and subjects who received peripheral vision training significantly improved in rate over subjects who received rate training only.

IV-13 Other factors related to reading

The purpose of the report by Mahmoudi and Snibbe (356) was to study and measure the effect of expectancy in the affective domain. All 107 pupils in the 5 classes represented in the study (2 control, 3 experimental) were given the *Wide Range Achievement Test* (WRAT), *Group Personality Projective Test* (GPPT), and *Culture Fair Intelligence Test* (CFIT). At the same time, the 5 teachers were given the *Study of Values* and *State-Trait Anxiety Inventory*. The experimental group and/or its teacher were then read a statement that indicated how special the individuals involved were. In one experimental group, pupils only received the treatment; in another, the teacher-only; and in a third, both teacher and pupils. At the end of 5 months, all subjects were tested again with the same battery. Paired *t*-test scores were used to compare pretest versus post test means. There was a significant increase in the WRAT Reading and Spelling scores when pupils only received the treatment. For the teacher-only treatment, all 3 WRAT scales (Reading, Spelling, Arithmetic) showed significant increases. The teacher and pupils group showed a significant increase for all 3 WRAT scores also. In addition IQ scores for this group showed a significant increase, while there was a significant decrease on the GPPT Tension Reduction score and on the GPPT Total score. For both control groups,WRAT Reading scores also showed a significant increase, while in one control group an increase was noted in the WRAT Arithmetic and in the other control, in the WRAT Spelling. In the teacher-only and teacher-plus-pupils groups, teachers showed positive changes on the *Study of Values*. The authors postulated that manipulation in the affective domain in a classroom setting can have significant consequences for achievement scores, IQ scores, and the state of mental health. Both teachers and pupils must expect certain affective qualities to induce significant change, however.

Additional longitudinal data from an investigation of teacher bias and teacher expectancy effects on children's achievement test performance were presented by O'Connell, Dusek, and Wheeler (419). Alternate forms of the following subtests from the *Stanford*

Achievement Test (SAT) Primary 2 and SAT Partial Intermediate L batteries were administered to 22 grade 3 pupils in September and 16 grade 5 pupils in January: Word Reading, Paragraph Meaning, Spelling, Arithmetic Computation, Arithmetic Concepts. Earlier, when pupils were in second and fourth grades, SAT's had been administered and disguised as predictors of academic potential. At the same time, teachers had been asked to rank children on the basis of expected year-end performance levels for language and arithmetic skills. Teachers had then been given the names of 8 of the first 16 pupils ranked by them in each of their classrooms. The present report investigated long-term effects. Third and fifth grade teachers were also told that the tests were developed to predict academic potential in language and arithmetic skills. These teachers were not asked to rank pupils, however. Teacher bias manipulation had no effect on SAT performance. Teacher ranking in the previous year was strongly related to children's SAT performance.

Lewis and Adank (339) undertook an investigation of the relationship between attitudes toward school and school achievement in 2 different instructional systems. Subjects were 286 grade 1 to 6 pupils in a computer-backed individualized program and to 335 pupils in a self-contained school. Attitude was assessed by a pictorial attitude scale, and achievement was assessed in grades 1 and 2 by the *Lee-Clarke Reading Test* and in grades 3 through 6 by the *Stanford Achievement Tests*. Significant relationships were found between attitude and achievement at 2 of the 6 grade levels at each of the 2 elementary schools. For the pupils in the individualized programs, the relationship occurred at grades 1 and 5; in the traditional school, the relationship was noted at grades 3 and 4.

Firestone and Brody (176) studied the relationship among variables of achievement, motivation, and quality of student-teacher interaction with kindergarten children. A total of 79 subjects and 6 teachers comprised the sample; subjects were primarily of black and Spanish descent. Recordings of classroom interactions were made periodically over a period of 1 year, and interactions were categorized and scored in a modified version of the Flanders system. That is, positive, neutral, and negative interactions were categorized, as well as the number of times children were chosen for demonstrations in class. Achievement data was collected with the *Metropolitan Achievement Test*, IQ data with the *Lorge-Thorndike*, and motivation data with the *Primary Academic Sentiment Scale*. Results of interaction scorings, tests of significance, and correlations indicated that the percentage of negative interactions in the second half of kindergarten showed a significant negative relationship to scores on all subtests. The total number of times children were chosen to demonstrate something in class positively and significantly related to their subscores on word knowledge and total reading. Motivation emerged as a significant source of variance for word knowledge, word analysis, and total reading when IQ was partialled out. Additional results and discussion of results are included.

Karweit (283) applied Wiley and Harnischfeger's model to several sets of data in determining the effects of quantity of schooling on achievement. The sixth and twelfth grade Equality of Education Opportunity (EEO) data, 20 high school data sample, and 1974 achievement data from the state of Maryland were all used. Math, reading, and verbal scores were included in the information analyzed. Findings supported the conclusion that quantity of schooling (attendance) played, at best, a modest role in achievement.

Bidwell and Kasarda (45) examined determinants of organizational effectiveness, using data from 104 school districts in Colorado. Five environmental conditions, 3 components of district structure, and 1 of staff composition were examined along with reading achievement and mathematics achievement. Environmental variables were school district size, fiscal resources, per cent of economically disadvantaged students, educational level of parents, and per cent of non-whites in the population. The organizational attributes viewed were pupil-teacher ratio, administrative intensity or administrator-teacher ratio, and the ratio of professional staff support to teachers. The staff composition variable was the per cent of the total certified staff who held at least a Master's degree. The results indicated that pupil-teacher ratio and administrator-teacher ratio depressed median levels of achievement, but staff qualifications fostered achievement. Other effects are discussed in detail.

The relationships between classroom behavior patterns and academic achievement were studied by McKinney, Mason, Perkerson, and Clifford (376). In addition, the predictive value of combinations of discrete behaviors at beginning and end of the school year were evaluated. Subjects were 44 boys and 46 girls sampled from 5 grade 2 classrooms in 3 schools. Average IQ on the *Primary Mental Abilities Test* was 98.69. Socioeconomic level was determined by the Hollingshead scale for occupation of father. There were 39 children in the upper-middle range, 28 in the middle range, and 23 in the lower-middle range. Behavior was observed by means of the *Schedule for Classroom Activity Norms* (SCAN). In this procedure, classroom behavior is coded into one of 27 categories every 10 seconds. For the study, each child was observed for 5-minute periods on each of 4 days during the language arts period. A total of 120 observations were taken for each child in the fall and again in the spring. A factor analysis method was used to determine that 6 behavior categories could be retained as independent variables and that 15 of the original categories could be combined to form 6 additional variables. The Reading Vocabulary, Reading Comprehension, Mathematics Computation, Mathematics Concepts and Problems, and Language Usage and Structure subtests of the *California Achievement Test* (CAT) were administered in September and again in May to determine academic progress. The *Primary Mental Abilities Test* was also given. Using multiple regression procedures, it was determined that the following 4 categories of fall behavior predicted 33 per cent of the variance in fall achievement: distractible behavior, passive responding, dependency, and constructive play. High frequencies in the first 3 were associated with lower initial achievement and high frequencies of constructive play were predictive of higher initial achievement. In the spring, frequencies of constructive self-directed activity and aggression were found to be significant predictors of spring achievement scores. When frequencies of attending and task-oriented interaction were added to the first 2 variables, the resulting 4-variable model accounted for 25 per cent of spring achievement. Generally, the major categories of fall behavior which were related to fall achievement also predicted spring achievement.

The extent to which reading achievement predicts success in college was the subject of an investigation by Wilson and Einbecker (586). Reading Index scores on all subjects from the *Florida Twelfth Grade Test* were obtained, as well as college grade point average for a minimum of 12 semester hours of college work. Both scores were entered into a stepwise multiple regression analysis. Findings revealed a positive and significant relationship between twelfth grade reading achievement and college performance, with the Reading Index being a significant predictor of freshman college grades. Reading achievement accounted for from 17 to 28 per cent of the variance associated with grades, depending upon the institution subjects were attending.

Whalley and Fleming (580) conducted an exploratory investigation of a device designed to record the behavior of subjects during reading. The reader recorder consisted of a large base on which sits the reading material and a moveable "torch" used by the subject to illuminate the portion of the text being read. The movement of the torch maps the subject's reading behavior, since only the directly illlumined material can be read. The torch was set to illuminate an area of 1 column, 3 lines at a time. It was also arranged so that the reader could illuminate a larger space if desired. The recorder was constructed so that it could be keyed into a computer and reading behavior could be recorded on magnetic tape. Readers subsequently read 2 articles differing only in the placement of diagrams. Experimental subjects perceived a higher level of understanding and clarity than controls.

Palmatier and Bennett (428) examined notetaking of college subjects. Subjects in the study ranged from sophomore to graduate level. A questionnaire was administered to subjects asking if they took lecture notes, took reading notes, and felt that notetaking was essential. They were asked what kind of notebooks they used, and the extent to which they had received formal instruction in notetaking skills. A total of 99 per cent responded that they took notes from lectures, but only 71 per cent indicated they took reading notes. Ninety-six per cent felt notetaking was essential to success in college. Only 17 per cent reported having received any formal instruction in the skills of notetaking. Further examination of the questionnaire responses of subjects with different grade point averages was conducted; however, no differences were found among subjects related to grade average.

Frymier, Henning, Henning, Norris, and West (190) gave 853 seventh graders the *Junior Index of Motivation* (JIM) and followed up 591 of the sample in order to determine if the JIM was of any value in differentiating college-bound from non-college-bound subjects. The JIM is an 80-item questionnair type scale. JIM scores were correlated with subtest scores from the *California Achievement Test*, the *California Test of Mental Maturity*, and school grades. Correlations indicated that all subtest correlations with the JIM were significant ($p > .001$) and ranged from .258 to .451. Results also indicated that the JIM was related to later academic achievement (high school and college grades). Finally, subjects who attended college scored an average of 13.2 points higher on the JIM in the seventh grade than did high school graduates who did not go to college. There were no appreciable differences between high school graduates and dropouts.

Stolurow (529) investigated the effects of variations in frame sequence on performance on a programed learning task. A total of 105 second graders were asked to identify verbs, nouns, and adjectives from simple sentences. Sentences were sequenced along relevant dimensions (dependent upon the part of speech to be identified), irrelevant dimensions (where other features were varied), and in such a way that both relevant and irrelevant dimensions varied simultaneously. Four dependent measures were obtained: time, program errors, and post test errors of omission and commission. Data analyses were conducted using a multiple analysis of covariance and subsequent univariate analyses on dependent measures. Significant ($p<.001$) treatment effects were found for the time to complete program, errors in program, and post test errors of omission. The author discusses the results in terms of the role of sequence as a variable in learning.

Macleod (355) studied a number of factors that affect the development of reading ability in Scottish secondary school pupils. First, textbooks in use in the 14 schools studied were assessed with the SMOG and Dale-Chall readability formuli. Although exact grade placement by the formuli differed, both pointed up as much as a 5-grade level variation in same level books from fifth to ninth grade reading level (Dale-Chall). Students' reading habits were also investigated by use of a questionnaire sent to teachers. Amount of reading was positively related to reading attainment. The author provides additional discussion regarding the transition of students from primary to secondary school reading, and in assessing reading skills in secondary school.

Ruggieri and Purnell (481) studied the effectiveness of scores from a graded word list for identifying remedial readers. The hypothesis tested was that the *Slosson Oral Reading Test* would correlate significantly higher than the *California Achievement Test* with performance on Silvaroli's *Classroom Reading Inventory*. Test scores were obtained from 46 children in grades 1 through 6, all of whom attended Title I schools. Data analyses consisted of intercorrelations among all tests. The correlation between the SORT and CRI was .90, .74 between the CAT and CRI, and .74 between the SORT and CAT. Results supported the original hypothesis. The authors provide discussion regarding the practical implications of using the SORT in identifying remedial readers.

In a series of 3 experiments, Fisher and Lefton (178) examined the information extraction processes of children and adults to determine a developmental sequence. In Experiment 1, the effects of word boundary and word shape on reading speed were manipulated. The 216 children were from grades 3, 4, and 6 and were all at or above grade level in reading. In addition, 72 psychology students were involved. Subjects were presented with 4 short paragraphs to be read—each followed by 10 multiple choice questions. Paragraphs were typed in 3 different spacing and 3 different cases, thus giving 9 possible combinations. Spacing between words was normal, filled with a neutral symbol, or absent. Two types of typographical manipulations were used: case of the letters within the paragraphs was as normally experienced, or case was in alternating upper and lower case letters. Both word boundary and word shape effected rate, which also increased with age. In Experiment 2, 6 target words were chosen for each paragraph for each grade level and subjects were checked for time and accuracy in locating the critical words. The data showed increasing performance decrements with increasing experience with English text. For Experiment 3, 5 children at each of grade levels 2, 3, and 5, and an unspecified number of paid undergraduates volunteers were used. Subjects were asked to judge whether briefly presented pairs of letters were the same or different. Retinal (spatial) location was varied from trial to trial with reaction time used as the dependent measure: Results showed a developmental progression in response time with complex interactions. The authors interpret their data in the framework of a model of the reading process.

McNinch (379) investigated the association of phoneme shifting in prereading and beginning reading samples at the beginning of grade 1 and grade 2. The *Metropolitan Reading Readiness Test* (MRRT) or the *Metropolitan Reading Test*, Primary 1 (MRT) were given in September of grade 1 or grade 2 respectively. Four groups were formed: Group 1 included grade 1 pupils scoring above the 60th percentile on the readiness test; Group 2, grade 1 pupils scoring below the 40th percentile on the MRRT; Group 3 consisted of grade 2 pupils scoring above the 60th percentile on the MRT; and Group 4, pupils scoring below the 40th percentile on the MRT. Based on readiness or reading scores, pupils were divided into good and poor groups and individually administered a 13-item phoneme shifting test (PST). For beginning grade 1 pupils, no significant differences were noted between good and poor groups in the quality of their phonemic shifting responses. No differentiation was noted for beginning readers either. The author posited that success in beginning reading can progress without developed abilities in phoneme shifting when the pupils are instructed under a basal system.

A secondary analysis was made of the data from the mathematics, science, and reading comprehension International Educational Achievement studies to determine the relationship between age of entry into school and achievement at ages 10 and 13. Austin and Postlethwaite (21) found that earlier age of entry was associated with higher scores in mathematics at age 13 and with lower scores in reading and science at age 10. The authors suggest various possibilities for their findings.

Ratings on 2 teacher rating scales were compared by Camp and Zimet (77) with observations of classroom behavior and results of achievement tests. Complete data on the *Pittsburgh Adjustment Survey Scale* (PASS) and the *Connors Teacher Rating Scale* (CTRS) were available for 49 children. The PASS has 96 items and can be examined in terms of 4 subscales: Aggressive, Passive-Aggressive, Withdrawn, and Prosocial. The CTRS requires a rating of 39 items which can be broken down into 5 subscales: Hyperactive; Daydreaming-inattentive; Anxious-fearful; Health, sociable, cooperative; and Defiant-aggressive. Through the school year, 2 trained observers were randomly assigned to one of the 2 classrooms each day for purposes of observing 10 randomly selected children during a reading class. A maximum of 9 half-minute segments per observation period were made per child each day. Behavior was recorded in 39 categories and was summarized as On-task, Off-task, Deviant, and Non-deviant. In addition, subjects took the *Otis-Lennon Intelligence Test* and at least the reading portion of the *California Achievement Test*, the *Metropolitan Achievement Test*, the *Gates-MacGinitie Achievement Test*, and the *Gilmore Oral Reading Test*. Only subscales on the PASS and CTRS showing no significant differences between the 2 classrooms were used for comparisons with observations and achievement. Off-task behavior correlated significantly and positively ($r = .31$) with the Daydreaming subscale of the CTRS and significantly but negatively ($r = -.38$) with the Prosocial subscale of the PASS. Achievement measures and mental age correlated with the Prosocial subscale of the PASS between .56 to .81, negatively with the Daydreaming subscale from -.59 to -.76, and negatively on the total CTRS ($r = -.30$ to $-.58$).

The accuracy of digit-naming speed to predict end of grade 1 reading achievement was the focus of the brief report by Spring (520). The *Cooperative Primary Reading Test* was used as the criterion measure of reading achievement. The *Digit-Naming Test* was administered 5 months prior to the reading test. On this test, a subject named 30 randomly sequenced digits, printed in 2 rows, as fast as possible. Two-syllable digits were excluded. Boys were significantly slower than girls on digit-naming; however, there was no difference in number of errors. Differences between sexes on reading achievement did not reach significance. The coefficient of correlation between digit-naming speed and reading scores was .53.

In his series of 4 experiments, Fisher (177) proposed to examine the effects of word boundary, word shape, and their interactions on reading and visual speed search; to ascertain the degree of contextual awareness taking place during search by manipulating target expectancy and predictability; and to evaluate the contributions of peripheral and foveal processing during reading and search. In Experiment 1, 81 undergraduate introductory psychology students were presented with 9 paragraphs taken from the 2 forms of the *Nelson-Denny Reading Test*. Three type and spacing variations were used to alter the text. Spacing variations were normal, filled, and absent; type variations were normal, capital, and alternating. In the latter, upper- and lowercase letters were alternated throughout. Following each paragraph, 4 multiple choice questions taken from the Nelson-Denny were asked. A difference was found in type variations only for comprehension. Rate decreased when word shape and boundaries were perturbed. For Experiments 1 and 2, search was found to be 2 to 2.5 faster than reading. Both reading and search slowed to 1/3 of the normal speeds when spaces were removed and type altered. For reading, a significant interaction of type by space was noted, but this did not hold true for search. Experiments 3 and 4 examined contextual and typographical effects on high-speed visual search through paragraphs. Form-class expectancy and target word predictability, respectively, were manipulated. Subjects found the expected predictable words faster than the unexpected unpredictable words in both experiments. The author felt that his data provided support for the peripheral and cognitive search guidance processes hypothesized to be active in reading.

Cohen (94) compared subjects' performance on cloze tasks based on materials from 3 content areas. Seventh graders in the study had a mean IQ (*California Test of Mental Maturity*) of 120 and a mean Total Reading grade level (*California Test of Basic Skills*) of 8.28. Sample passages were drawn from textbooks in social studies, science, and literature; the textbooks were used in local junior high schools, but the present subjects had no experience with them. All passages were 250 words long, equivalent in readability (Dale-Chall), were clozed with an every-fifth-word deletion, and were scored by the exact replacement method. Additionally, a 10-item multiple choice comprehension test was constructed for each passage, testing a variety of literal and inferential comprehension skills. Each subject was administered all cloze tasks and then read one of the passages. The subject then responded to the traditional comprehension test. Results indicated that mean cloze scores across the 3 content areas ranged from 30.5 to 39.6 per cent correct. Correlations between cloze and multiple choice tests were all significant ($p < .01$) and ranged from .35 to .55, with an overall correlation of .43. The author discusses the instructional implications of the study.

Ayllon, Layman, and Kandel (23) studied the effects of a token reward system on hyperactive behaviors and subsequent reading and math performance with 3 children from 8 to 10 years of age. Math performance was comprised of adding whole numbers; reading performance was comprised of responses to tasks in the *Merrill Linguistic Readers*. Using a time-sample method, hyperactivity was measured during math and reading classes under conditions of medication and no medication. A behavioral program using teacher reinforcement was introduced during periods of no medication. Reinforcement reduced hyperactive behaviors to a level equal to that achieved with drugs. Further, math and reading performance for the subjects jumped from 12 per cent correct responses to 85 per cent correct, when compared to conditions of no medication or reinforcement.

IV-14 Factors related to reading disability

One report focused on a 3-year follow-up of 42 subjects who had been classified in kindergarten using the criteria specified by deHirsch. Holmes, Stout, Rosenkrantz, Bickham, and Schnackenberg (260) evaluated the subjects on their reading, spelling, and handwriting skills. Reading was assessed by means of the *Gates-MacGinitie Reading Tests*, Primary C, Vocabulary, and Comprehension for Grade 3, and the *Gates-MacGinitie Reading Tests*, Primary CS, Speed, and Accuracy for Grades 2 and 3. The data were then subjected to a stepwise multiple-regression analysis in order to examine the contributions of various predictors on the various academic areas. The deHirsch predictor variables of Horst reversals, IQ, sex, and Word Recognition showed a multiple coefficient correlation of .75 with Vocabulary. A multiple coefficient correlation of .74 was obtained for comprehension with the following 5 variables as predictors: total deHirsch, IQ, Word Recognition, sex, and Bender scores. On reading accuracy, a multiple correlation of .75 was found using Horst reversals, sex, and Bender scores. The authors conclude that the deHirsch classification appears accurate in classifying children who are at or above grade level by the end of grade 3. However, in terms of identifying children who are high-risk or who are not at grade level, the deHirsch prediction system has a low accuracy rate and many high-risk children were not identified in the population studied.

Book (51) carried out research designed to formulate a predictive index for reading difficulties. During December of the kindergarten year, teachers submitted lists of children suspected of having low or below average intelligence. Each of these children were then given the *Slosson Intelligence Test* (SIT). In April, all kindergarten children were given the *Metropolitan Readiness Tests* (MRT). Those scoring in the first quartile on the MRT and who had IQ's of 85 or lower on the SIT were given the *Stanford-Binet Intelligence Test* (S-B). All children scoring in the first quartile on the latter and Form Copying subtest of the MRT were administered the *Bender-Gestalt Test for Young Children* (B-G). Six diagnostic categories were then established and children assigned to one of them. Category 1 were children considered for placement in educable mentally retarded classes who had IQ scores of 80 or less on the S-B, MRT scores of 47 or less, and B-G error scores of 10 or more. In Category 2 were children with IQ scores from 81 to 93, MRT scores of 48 or less, and B-G error scores of 10 or more. These children were considered for extended readiness programs and/or classes for the neurologically handicapped. Category 3 children had IQ scores of 94 or higher but had the same B-G and MRT scores as Category 2. Their placement was the same as Category 2 children. In Category 4, children exhibited the same IQ and MRT scores as in Category 3 but B-G error scores of 9 or less. They were considered for extended readiness and/or tutorial programs. Category 5 children had IQ scores of 94 plus, MRT scores from 49 through 57, and B-G error scores of 9 or less. They were considered for extended readiness programs. Category 6 children had the same IQ and B-G score stipulations as Category 5 but MRT scores of 48 or higher. A significant coefficient of correlation ($r = .99$) was found between the diagnostic battery and end of grade 1 and end of grade 2 achievement.

A stepwise discriminate analysis using scores on the *WISC*, *Frostig Development Test of Visual Perception*, and the *Wide Range Achievement Test* (WRAT) and 3 behavioral ratings was performed by Black (46) to compare patterns of performance of documented and suspected neurological dysfunction children. Inclusion in the documented neurological dysfunction sample was based upon a medical diagnosis which included a neurological examination, birth and developmental history, EEG, and more specialized neurodiagnostic procedures where indicated. Inclusion in the suspected neurological dysfunction group was based upon a neurological examination, psychological evaluation, birth and developmental history, and EEG. At least 3 of the following criteria were required for placement in the group: 1) non-specific EEG abnormalities, 2) significant visual perceptual dysfunction, 3) significant hyperactivity and/or distractibility, 4) significant motor clumsiness, and 5) a history of birth process or developmental abnormality. The 2 samples did not differ significantly when all relevant variables were compared with the stepwise discriminate analysis. Comparisons were made of the 2 samples, using univariate analyses of variance. Comparisons of Frostig total score, Frostig subtest performance, and WRAT performance in reading, spelling, and arithmetic did not approach significance. The only consistently noted differences were on the WISC measures, with all comparisons favoring the suspected neurological dysfunction group. The authors conclude that specialized remedial programs differentiating between these 2 groups appear to be unwarranted.

A follow-up study of 61 children identified in kindergarten as high risks on the basis of 4 clusters of observable behavior was reported by Forness, Guthrie, and Hall (181). In the first cluster were children with low verbal positive behavior, high task attention, low non-attention, and no observable disruptive behavior. In Cluster 2 were children characterized by medium levels of verbal positive behavior and attention, high non-attention, and very little disruptive behavior. Cluster 3 children exhibited a pattern similar to Cluster 2 pupils except for a slightly higher level of disruptive behavior. Cluster 4 subjects were characterized by relatively high verbal positive behavior, low task attention, high non-attention, and high disruptive behavior. Kindergarten teacher ratings confirmed the rank order of these clusters in terms of educational risk with Cluster 1 children rated significantly higher and Cluster 4 children, significantly lower. In May and June of grade 1, teachers in the 5 first grade classrooms were asked to evaluate each child in their class on a 5-point scale in reading, arithmetic, classroom behavior, and peer relationships. *Peabody Individual Achievement* tests were also administered to each child. The predictive validity of clusters of observable kindergarten behavior were only partially confirmed. Children in the non-risk cluster continued to do well while children in Cluster 4, high risk, were still doing poorly in most areas but significantly so only in classroom behavior. However, Cluster 2 children, who were seen as non-risk, dropped somewhat in academic standing.

The Z-score Discrepancy method for identifying reading disabled children in school settings was compared by Erickson (157) with the Years Below and the Bond and Tinker Discrepancy methods. In the Z-score method, test scores on IQ and achievement are each converted to Z-scores. The 2 Z-scores are then subtracted using a minus sign to designate the scores in which the reading Z-score is lower than the IQ Z-score. Two samples of third grade subjects were individually administered the *Slosson Intelligence Test* (SIT) and the *Slosson Oral Reading Test* (SORT). Reading disabled children were identified by each of the 3 methods. For comparison purposes, 10 per cent of the children in each sample were considered reading disabled by each of the 3 methods. In the first sample of 79 children, 8 were identified as reading disabled by each formula; in the second sample of 99, 10 were identified by each formula. In the first sample, the Years Below and Bond and Tinker methods identified 7 out of the 8 children in common. The mean SIT and SORT scores for both groups were below the mean for the total sample. The *Z*-score group identified children whose SIT scores were above the sample mean but whose SORT scores were below the sample mean. The latter group shared 2 children in common with the Bond and Tinker group and 1 in common with the Years Below group. Similar results were reported for the second sample. The author feels that the *Z*-score method more accurately identifies children who are achieving at a level considerably below their potential than do the other 2 methods.

Children identified as severe underachievers in mathematics and/or reading were studied by Goodstein and Kahn (206) in an effort to determine the relationship among measures of intelligence, reading achievement, and mathematics. Data collected included CA; WISC full scale, verbal, and performance IQ's; the *Gates MacGinitie Reading Test*, Primary, administered in May of 1972 and in May of 1973; the SRA Achievement Series in Arithmetic, 2-4, given in October 1972 and May 1973; and an informal criterion referenced achievement test also administered in October and May. Subjects were 18 children at grade 4, 16 at grade 5, and 16 at grade 6. Mean full scale IQ was 97.52. A factor analysis indicated that the factors of arithmetic computation, reading achievement, and IQ were stable and relatively independent, indicating that it was not possible to reliably predict arithmetic computational disability from knowledge of reading disability and vice versa. In addition, IQ's were independent of the degree of disability in the academic areas.

In Britain, Pumfrey (447) referred to 3 recent studies investigating the *Illinois Test of Psycholinguistic Abilities* (ITPA) as a means of detecting first year junior school children who are poor risks for reading. In the first study, the 12 subtests of the ITPA, the *English Picture Vocabulary Test 2*, the Wepman *Auditory Discrimination Test*, and a Sentence Repetition Test were used as predictor variables; the Schonell *Graded Word Reading Test R I* and the *Group Reading Test* were used as criterion measures. The best combination of predictors were the Visual Sequential Memory, Visual Closure, and Auditory Sequential Memory subtests of the ITPA and the *English Picture Vocabulary Test*. For the Group Reading Test, Grammatic closure on the ITPA was also included. In the second study, poor readers from 16 schools were identified. This group, totalling 48 first year junior school children, was tested on the ITPA and patterns were analyzed using 3 intelligence levels. All groups were lowest on the Auditory closure subtest. In the third study, 2 intervention programs were used, with 60 children identified as educational risks because of poor reading. Their ITPA scores were similar to those of the group in the second study. Twenty-four of these children were given 24 activities designed to alleviate deficits in auditory closure and visual sequential memory (Kirk group). A second group of 24 received 24 lessons from the Peabody Language Development Kit (PDLK group). The remaining 12 pupils acted as controls. Programs were carried out over a 12-week period. Post testing—consisting of the ITPA and 3 reading tests—was carried out. Both experimental groups showed marked improvement on the reading tests, but there was no significant difference between the 2 on any of the 3 reading tests.

The objectives of the study by Kapelis (281) were to determine the predictive validity of 2 screening tests for end of grade 1 reading achievement and to compare these with the accuracy of teachers' judgments. *Meeting Street School Screening Test* (MSSST) and the Slingerland *Prereading Screening Procedures* (PRSP) were administered 2 weeks after the beginning of school. At the end of the sixth week of school, 11 teachers were asked to indicate on a 5-point scale the reading level they expected at the end of the year for each of 10 children sampled from their classes. The scale corresponded to 5 reading difficulty levels, ranging from below beginning grade 1 to above grade 3. The Primary I Battery of the *Metropolitan Achievement Tests* (MAT) was administered in May of first grade to assess reading achievement. The 10 children not available for spring testing were omitted from the study. The PRSP was the best predictor of subtest scores on the MAT and correlated .66, .68, and .68 with Word Knowledge, Word Discrimination, and Reading, respectively. The MSSST correlated .58, .64, and .62, respectively, while teacher predictions with reading achievement scores were .46, .49, and .48. The Language subtest of the MSSST showed the highest relationship with reading achievement (.59, .66, and .66, respectively). Stepwise regression analyses showed the Language subtest of the MSSST and the total PRSP score to be the best combination for predicting MAT Word Knowledge; total PRSP, Language, and Visual Discrimination of Letter Forms, for MAT Word Discrimination; and total PRSP, Language, and Auditory Discrimination, for MAT Reading.

Rourke and Finlayson (476) placed their 45 learning disabled children into 3 groups on the basis of performance on the *Trail Making*

Test (TMT). The ages of the subjects ranged from 10 to 14 and the IQ range was 83 to 114. One group showed normal performance on Parts A and B of the TMT; the second group showed normal performance on Part A but responded in an impaired fashion on Part B; the third group had impaired performance on both Parts A and B. Other measures administered fell into 3 categories: verbal and auditory-perceptual, performance and visual-perceptual, and non-verbal problem solving. The performance of Group 3 was superior to Groups 1 and 2 on the WISC Verbal IQ measure, Group 1 exceeded Group 2 in performance on the WISC Verbal IQ, and Group 2 exceeded Group 3 on the WISC Verbal IQ measure, the WISC Verbal subtests, and the *Peabody Picture Vocabulary Test* IQ; they exhibited a high Performance IQ relative to Verbal IQ; their performance on the Coding subtest of the WISC was superior to that of Group 3. Group 3 subjects presented a pattern to be expected of children with a relatively dysfunctional right cerebral hemisphere. The results of the study suggested that specific patterns of TMT performance are related to consistent differences on a number of verbal, auditory-perceptual, visual-spatial, and psychomotor abilities.

Badian and Serwer (25) administered a test battery toward the end of the kindergarten year in order to identify children with learning disabilities. Children were administered the Goodenough-Harris *Draw-a-Man*, *Primary Mental Abilities* (PMA), *Metropolitan Readiness Test* (MRT), and a geometric form copying test. In addition, a test of letter names was individually given. Intelligence was defined as the higher score obtained from the total PMA score or the average of the PMA Verbal subtest and the Goodenough-Harris. Achievement was defined as the combined performance on the MRT and letter names test. Learning disability was defined as a discrepancy between achievement and potential, a discrepancy between verbal and non-verbal ability of at least 12 points, intratest scatter among verbal and non-verbal PMA subtest scores, and the lowest rating on a visual-motor copying test. A total of 62 children were identified as risks for learning disabilities. Early in grade 1, the 62 subjects were given the WISC or WPPSI and the ITPA. Children were randomly assigned to 4 groups: DISTAR reading, perceptual-motor, combined reading and perceptual motor, and a control group. Treatment groups were given 30 minutes help each day for most of the school year. In May of grade 1, the 55 subjects who remained were administered the *Metropolitan Achievement Test*, Primary (MAT). Analysis of variance techniques indicated no significant difference among the 4 groups on the 3 reading subtests of the MAT. On the MAT arithmetic subtest, the perceptual motor group scored highest and the

DISTAR group, lowest. The group mean on all MAT subtests were at the average level with percentiles of 50, 45, 38, and 40 for Word Knowledge, Word Discrimination, Reading, and Arithmetic respectively. Only PMA Numbers, Detroit Number Ability, MRT Numbers, MRT Alphabet, and the Detroit Orientation Tests differentiated best from worst readers.

Leton (336) evaluated the use of the *Stanford Diagnostic Reading Test* (SDRT), Level I, with pupils classified as learning disabled (LD). The 166 subjects had been enrolled in LD classrooms for a minimum of 3 semesters. Consistent age-grade increases were observed in the SDRT raw scores for the 7 subtests for grades 3 through 7. Grade 8 pupils (N=12) had a lower raw mean score in almost all areas than did grade 7 subjects. Interrelationship among SDRT subtests were studied by means of a factor analysis. The Syllabication and Sound Discrimination subtests received primary loading on the first factor; the Blending subtest received a high secondary loading. On the second factor, the Auditory Vocabulary and Auditory Discrimination subtests received primary loadings. A third factor consisted of the Reading Comprehension, Blending, and Beginning- and Ending-Sounds subtests. The 3 factors accounted for 55 per cent of the total test variance.

Lasky, Jay, and Hanz-Ehrman (328) evaluated differences between normal children and learning disabled children in their delayed-recall performance of auditory stimuli that were linguistic meaningful (words), linguistic non-meaningful (nonsense syllables), non-linguistic meaningful (environmental sounds), and non-linguistic/non-meaningful (pure tones). Learning disabled children (LD) were selected from special classes for such children. Normal children (N) were matched to LD pupils on the basis of IQ, sex, and age. In addition, subjects were screened to have vision, hearing, and language abilities within normal limits. The N group performed better than the LD group on each task. However, both groups performed better on words and pure tones than on the nonsense syllables or the environmental stimuli.

Bartel, Grill, and Bartel (35) investigated perservative response tendencies of LD children compared to normals. LD children attended a private facility and were identified on the basis of results from tests including the WISC, Peabody, Bender, ITPA, and others. In addition, LD's were low in reading and had soft signs of perceptual motor problems. LD's and normals were divided according to age, resulting in 4 experimental groups. A word association task was administered to all subjects requiring subjects to respond with the first word that came to mind after the experimenter had read a stimulus word. Overall, older subjects performed better than younger subjects. No significant differences were found on the task between LD's and normals. Young subjects with low IQ's showed perserveration to a much greater extent than any other group. Discussion centers around attentional and memorial processes as explanatory of the findings.

The purpose of the 2 experiments by Mason, Katz, and Wicklund (364) was to test for spatial order memory differences as a function of reader ability. For the first experiment, 16 good and 16 poor sixth grade readers were identified, using the previous year's scores on the Science Research Associates (SRA) reading comprehension scores. Subjects were presented with 4 or 6 lowercase consonants as stimuli in either redundant (R) or non-redundant (NR) strings based on positional frequencies of letters in printed English. After pronouncing them, the letter stimuli were removed and subjects were asked to arrange letters presented on tiles in the order in which they had appeared on the stimulus card. Almost perfect performance was found for 4-letter strings in both R and NR conditions by all readers. Good readers were better than poor readers at reconstructing the spatial order of 6-letter strings. Redundancy improved the memory code for both groups of readers. In Experiment 2, both immediate order memory and immediate item memory for 8 items were investigated as a function of reader ability and type of material. Consonants and digits were the 2 types of materials used. Subjects were 80 pupils from 3 grade 6 classrooms with good and poor readers formed on the basis of a median split on the SRA reading comprehension scores or the *Wide Range Achievement Test*. Four tasks were required: 1) to place 8 letters in correct order, 2) to place 8 digits in correct order, 3) to recall as many of the 8 letters as possible, and 4) to recall as many of the 8 digits as possible. The main effects of reader ability and of type of material were both found to be significant. Good readers were better than poor readers at reconstructing the spatial order in both letter and digit displays. More digits than letters were correctly placed. The authors suggest that the findings point to an order memory deficit in poor readers.

Camp and Zimet (76) explored the relationship between reading achievement and behavior problems by observing behavior in high, middle, and low first grade reading groups. Two trained observers were randomly assigned to one of 2 classrooms each day and observed approximately 10 children, assigned randomly. Observers watched a child for 20 seconds, then recorded for 10 seconds. A maximum of 9 one-half minute segments were obtained for each child during 12 to 15 observation periods over February, March, and early April. Behavior was recorded in 39 categories and a child's score in a category was the mean over all observation periods. Decreasing reading skill was associated with fewer time samples in which no deviant behavior occurred and in which more interruptions occurred.

Serum total thyroxine was measured by Park and Schneider (430) in a group of 47 boys and 6 girls who suffered from functional dyslexia, defined as a reading level at least one and a half years below mental expectancy. All were of average or above in intelligence. A control group of 18 boys, who were reading at a grade level consistent with mental ability, also had the thyroxine determinations. Control children had thyroxine values similar to those found in healthy adults. The thyroxine content of the serum of dyslexic children was markedly elevated compared to normal readers.

Allington, Gormley, and Truex (7) presented poor and normal readers with high frequency, low discriminability words in 4 conditions. The 12 poor readers consisted of 4 girls and 8 boys; the 12 normal readers, of 6 girls and 6 boys. All subjects were randomly selected from the third grade population of 3 cities. They were judged poor readers if they scored at or below the third stanine on the *Metropolitan Achievement Test*, Primary II; normal readers were randomly selected from children scoring at the sixth stanine. The 4 conditons were Match to form (MF), Delayed recall (DR), Reproduce from memory (RM), and Reading words in isolation (WI). Words in conditions DR, RM, and WI were all presented tachistoscopically. Only on the WI task did good and poor readers differ significantly. The authors conclude that a visual perceptual deficit is unlikely to be a major factor in reading disability.

The aim of the study by Kolers (306) was to assess good and poor readers on their encoding of the semantic and graphemic features of sentences. Subjects read 2 decks of sentences. In the second deck were all the sentences of the first deck plus an equal number of new ones. Both old and new sentences in deck 2 appeared half in normal typography and half in an altered typography. The task, a test of recognition memory, required the subject to read aloud the sentences in deck 2 and identify each as a new sentence; same sentence, same form; or same sentence, different form. Good and poor readers were identified on the basis of school records supplemented with the *Wide Range Achievement Test* (WRAT) and the vocabulary portion of the WISC. Poor readers were markedly retarded in aspects of the graphemic analysis of the texts. The 2 groups did not differ in grammatical use of words, in short- or medium-term memory for what they had read, or in their rate of improvement in speed of reading.

Kastner and Rickards (284) studied recall of good and poor readers with familiar and novel stimuli. The 24 grade 3 pupils were identified by teachers as coming from lower-middleclass families and as having at least average IQ's. The *New York State Reading Test* was used to designate children as either good readers, scores at or above the 75th percentile, or poor readers, scores at or below the 25th percentile. Following a pretraining period, subjects were asked to repeat a sequence of tapped stimuli involving first familiar block forms and then novel block forms. Recall scores were the primary basis for comparing groups. Mean recall scores were significantly higher for good readers than for poor readers and higher for the familiar blocks when compared with the novel shapes. No difference in recall between the 2 groups was noted for familiar stimuli, but good readers were found to do significantly better than poor readers in the novel stimuli condition. Poor readers appeared to switch from a verbal to a visual strategy in the novel condition while good readers maintained a consistent verbal strategy in both conditions. The authors feel their findings lend support to the notion that poor readers have a deficit in applying verbal labels to some physical stimuli.

Sidman and Kirk (502) tested children with reading problems for reversal errors in letter naming, writing, and both simultaneous and delayed matching. The 15 subjects had been referred by their schools for tutoring in reading but were considered neurologically normal. They ranged in age from 7-9 to 14-7. Four tasks were performed: simultaneous matching to sample, delayed matching, oral naming, and writing. Stimuli were either visual, auditory, or tactile and consisted of upper- and lowercase forms of 16 letters. Reversals were most common when the task called for matching uppercase and dictated samples to lowercase comparison stimuli; next most common in naming lowercase *b, d, p,* and *q*; and rare in all writing tests. With continued testing, reversals disappeared in naming and writing but continued in matching to sample. Delayed matching increased the probability of reversal errors.

An object-image-projection method was described by Isgur (269) in an experiment to teach sound-symbol associations to 10 nonreaders who knew less than half of 26 letter-sound associations. The experimental method involved the use of real objects whose names were cues to beginning letter sounds. For example, an actual cup was used for /c/ and actual mittens for /m/. Also, the objects were shaped to present a visual appearance of the letters they represent. Thus, the real objects provide the basis for associations between the name of the object, the first sound in the name when pronounced, and the visual, tactile, and proprioceptive sensations related to viewing and tracing the objects. For each subject, 3 unknown letters were taught in 15-minute time blocks each day under the experimental method until criterion mastery was met. Criterion testing was achieved by presenting the letters 1 at a time, in a page of printed words, and allowing each subject 10 seconds to identify the appropriate phonemes. Eight of the 10 subjects succeeded on the criterion measure after only 5 to 10 minutes of training per letter.

Lawrence (331) reported a series of studies investigating the effects of individual personal counselling on retarded readers. In Experiment 1, 4 groups of children matched for CA, sex, MA, and reading attainment were studied. Group 1 received remedial teaching from a reading specialist; Group 2 received remedial reading and counselling; Group 3 counselling only; Group 4, no treatment. At the end of 20 weeks, all children were retested on the *Schonell Word Recognition Test* and counselled children were also retested on the Porter and Cattell *Children's Personality Questionnaire*. Children in the counselled group showed a greater improvement in reading attainment than other groups. A pilot study led to the conclusion that non-professional personnel could carry out successfully the counselling of retarded readers. In a second experiment, non-professionals were again used to conduct individual personal counselling with retarded readers. Children were administered the *Sleight Nonverbal Intelligence Test*, Porter and Cattell *Children's Personality Questionnaire*, and the *Schonell Word Recognition Test*. Six children in each of 4 schools were matched with a control group on sex, MA, CA, and reading age. Counselled groups made greater gains in reading than did control groups.

Kirk and Elkins (296) elicited descriptive information about more than 3,000 children enrolled in 21 Child Service Demonstration Centers in an attempt to determine age, intellectual, sex, remedial, disability, and instructional methodology characteristics of the entire sample. Data were collected via questionnaire responses to the demonstration centers. Results indicated that: Most of the children being served by the centers were in the lower elementary grades; there were 3 boys to every girl enrolled in the centers; approximately 2/3 of the children in the sample were rated as having reading problems; and the median educational deficit of the children was 1 grade below the mental age reading grade level. Additional findings showed that deficits in reading and spelling exceeded those in arithmetic by one half grade level, there was a disproportionately larger number of children with subnormal IQ's than would be expected in a normal sample, and resource rooms appeared to be the most common method of delivering services to the children in the sample.

IV-15 Personality, self concept, and reading

Prendergast and Binder (444) viewed 3 self concept measures to note how they related to one another and to determine their relationship to reading and mathematics achievement test scores. The *Tennessee Self-Concept Scale*, the *Rosenberg Self-Esteem Scale*, and the *Brookover Self-Concept of Ability Scale*, General were administered to the 369 grade 9 subjects. The *Houghton Mifflin Test of Academic Progress* was given as a measure of reading and mathematics skills. Of the 3 self concept measures, only the coefficient of correlation of .38 between the Brookover and the Rosenberg reached significance. The Tennessee correlated .984 with reading scores and .315 with mathematic scores. Correlation coefficients of .536 and .354 were obtained between reading scores and the Tennessee and Brookover scores, respectively.

Leviton and Kiraly (337) studied the relationship among self concept, reading, and mathematics achievement in first through third grade children identified as learning disabled. Achievement measures consisted of the Reading Vocabulary, Reading Comprehension, and Arithmetic Problem Solving subtests of the *Metropolitan Achievement Test*. Self concept was assessed by the *Self-Concept Self-Appraisal Inventory*. Correlations were computed among the scores. Results indicated that there was a range of correlation coefficients from -.45 to +.34. By third grade, all achievement measures correlated negatively with self concept, suggesting differences in this relationship with learning disabled children.

Chang (88) explored self concept, teachers' estimates of self concept, and academic achievement in fourth, fifth, and sixth graders of low SES. Achievement in reading and math was measured by the *Metropolitan Achievement Test*, self concept by the *Piers-Harris Children's Self-Concept Scale*, and teachers' estimates of self concept with an 18-item adjective checklist. Data analyses indicated a significant ($p<.01$) relationship between self concept and teachers' ratings of self concept, and a significant relationship ($p<.01$) between teachers' estimates and academic achievement. Additional results are reported.

Griffiths (213) studied the self-appraisals of self concepts of 131 children aged 6 to 14 who had been diagnosed as dyslexic. Diagnoses were made on the basis of large discrepancies between IQ on the WISC and measures of achievement in school including the *Gilmore Oral Reading Test*, *Stanford Achievement Test*, and *Wide Range Achievement Test*. A 35-item bipolar scale was used as the measure of self concept; items were read aloud. Younger children did not seem to relate their poor school achievement to a personality clash with teachers; the older children tended to see adults as contributing to or causing their difficulties. In general, subjects in the study exhibited desirable self concepts, but saw themselves as possessing negative traits: low intelligence, poor performance on school work, and poor reading ability. The author provides anecdotal discussions of responses for specific items.

Stenner and Katzenmeyer (526) investigated the relative effect of self concept on achievement and ability variables in 225 sixth graders. Eight subtests of the Scholastic Testing Service *Education Development Series* were used: verbal and non-verbal reasoning abilities, reading, English, math, science, social studies, and everyday problems. The self concept measure used was the *Self Observation Scales* containing a number of subscales. Results indicated that self concept and achievement variables were highly interrelated. However, there appeared to be a relatively high degree of independence between self concept as measured by the *SOS* and non-verbal intelligence. The authors report intercorrelations of achievement and self concept variables.

Aspy and Buhler (19) investigated the effect of teachers' self concepts on students' achievement. Six third grade teachers were identified as either high or low self concept on the basis of *Fiedler's Q-Sort* procedure and the combined ratings of 6 advanced graduate students, who had observed the teachers and rated their self concept. Then, in September, the 10 boys and girls with the highest IQ's and the 10 boys and girls with the lowest IQ's were chosen from each teacher's class to be tested with the *Stanford Achievement Test*. All subjects were retested with the same test again in May. Results of an ANOVA indicated that subjects of high self concept teachers were substantially better in Paragraph Meaning, Language, Word Meaning, and Work Study Skills than the subjects of those teachers with lower self concepts.

The purpose of the research by Kidder and Kuethe (293) was to examine the relationship of reading achievement to parental schemata. Subjects were 134 boys and 140 girls in 10 grade 5 classrooms, 5 with male teachers and 5 with female teachers. Subjects were given a booklet with each page having an outline stimulus figure of home, mother, or father on the right hand edge. They were then asked to place a "self stamp," an outline of a boy or girl, on the page. Teachers classified students into a high, middle, or low reading performance category based on reading group structure and observation. The distance each subject placed "self" from each parent figure was measured in centimeters. The 41 boys and 49 girls in the top reading group placed "self" closer to "Mother" than to

"Father," although the difference was significant for boys only; lowest reading group children placed "self" significantly closer to "Father" than to "Mother."

The effects of anxiety on reading performance under 2 stress conditions was probed by Morrison (398). Subjects were 80 boys and 72 girls, all fourth grade pupils. The *Test Anxiety Scale for Children* (TASC) and the *General Anxiety Scale for Children* (GASC) were given to assess the level of felt anxiousness. Two equivalent forms of the *Metropolitan Reading Achievement Test* (MAT) were used as measures of reading achievement. Subjects were randomly divided into a control group, a self-oriented group, and a parent-oriented group. Prior to administration of the second form of the MAT, subjects in the self-oriented group were given verbal instructions to try harder to improve their own performance over the first test. The parent-directed group was told that the score on the second test was important to their parents. Subjects were divided into low and high anxiety groups according to scores on the TASC and GASC. No significant effects were obtained on the GASC. On the TASC, the pattern for both low and high anxious pupils was to perform better under both motivational conditions than under control conditions. Further analysis showed that high anxious children in the parent-oriented group performed significantly better ($p < .05$) than high anxious children in the control or self-oriented conditions.

Stanton (523) studied the effects of music on test performance of high and low anxiety college students. All subjects were administered the *Test Anxiety Scale*, then assigned to high and low groups. Subjects then read a 1,500-word passage and responded to 20 comprehension items based on the passage. Experimental conditions consisted of doing the learning task in complete silence, doing the reading with music but doing the test in silence, and doing both the reading and test during the playing of music. A slow movement from a Mozart symphony was used in the experimental conditions. Results of ANOVA's indicated that low test anxious subjects did not benefit from any of the experimental conditions. However, high test anxious subjects performed significantly ($p < .05$) better when music was played. There were no differences between the 2 music groups.

Barton, Bartsch, and Cattell (36) examined the relationship between achievement and both anxiety and extraversion in sixth and seventh graders. Subjects were administered the *Culture Fair Intelligence Test*, the *High School Personality Questionnaire*, and standardized achievement tests (Educational Testing Service) in social studies, science, math, and reading. Successive administrations of the intelligence test and personality inventory occurred at 6-month intervals. ANOVA's indicated significant main effects and a number of significant interactions among dependent and independent variables. Chief among these was the general finding that extreme scores on either end of the extraversion or anxiety dimensions of the questionnaire were related to high achievement.

Learning style and its interaction with letter identification and discrimination was the subject of a study by Sunshine and DiVesta (532). First graders were classified on 2 cognitive style dimensions: impulsivity vs. reflectivity, and field dependent vs. field independent. The *Matching Familiar Figures Test* yielded an index of impulsivity/reflectivity, while the *Children's Embedded Figures Test* indicated degree of field dependency. The task material was comprised of 12 standard letter-like forms, each of which has 12 variants. The task required the matching of the standard with an identical figure from among 12 alternatives. Two conditions of task included low density where the row or column was displayed, and high density where all 6 rows or columns were displayed while the child worked on only one of them. Data indicated that the subjects required more time to select the first alternative to match with the standard on the horizontal format than they did on the vertical. The reflectives took longer to choose the first matching-to-standard alternative than did the impulsives. Impulsives made more errors than did reflectives, however. Field dependent subjects made significantly fewer errors when stimuli were presented in low-density. Field independent subjects made fewer errors. Additional results and discussion are provided.

The purpose of the report by Kagan and Zahn (278) was to assess the importance of cognitive style in determining school achievement of Anglo-American and Mexican-American children. In particular, the investigators hypothesized that field dependence and analytic cognitive style was a major prerequisite for school success. All of the 134 pupils involved in the study were in 1 school and 3/4 qualified for the free lunch program. The proportions of Mexican-American subjects ranged from about 1/4 at grades 2 and 4 to about 1/2 at grade 6. All Mexican-American pupils spoke English. Field independence-dependence was assessed by a "Man in the Frame" box containing a luminous silhouette of a man surrounded by a luminous square frame. The child's task was to turn a knob making the man stand up while ignoring the frame. Inability to ignore the frame demonstrated field dependence. In addition, grade 2 children were given the *1970*

Cooperative Primary Tests and children in grades 4 and 6 received the *1968 Comprehensive Tests of Basic Skills*. A general regression analysis supplemented by path analysis was performed on the data. The analysis was done on the natural log transform of the raw scores. Mexican-American children were found to be more field dependent than Anglo-American children. Furthermore, field dependence was significantly related to both reading and math achievement.

Rutkowski and Domino (482) explored the interrelationship between measures of study skills and personality variables in 201 college freshmen. Study skill measures included the SSHA, a multiple choice self-report test used to determine functioning in 4 areas of study behavior, a measure of the extent to which subjects avoid delay and distractions in studying, a measure of effectiveness in organizing study material, a measure of general impression of teachers, and a measure of acceptance of educational goals. The personality measure was the *California Personality Inventory*. All measures and subtests of measures were intercorrelated, and subjects in the top and bottom quartiles were compared on the SSHA and CPI with *t* tests. Additionally, the SSHA, CPI, and SAI scores were factor analyzed. Of the 72 coefficients involving the SSHA and CPI, 55 were significant. There were fewer significant correlations between the CPI and other study skill measures. Factor analyses yielded 5 main factors that accounted for 69.5 per cent of the total variance: 1) a general adjustment factor, 2) a factor of resourcefulness and cognitive thoroughness, 3) a factor of intellectual resourcefulness, 4) a factor of traditional study orientation, and 5) a factor of unconventionality. All intercorrelations are reported by the authors.

Tillman (546) explored the personality characteristics of 50 high school students in an Upward Bound program, and how those characteristics related to improvement in reading achievement. Reading achievement was measured by the *Stanford Diagnostic Reading Test* (Comprehension section). Personality variables measured in the study consisted of 4 continuum measures: extraversion/intraversion, sensing/intuition, thinking/feeling, and judging/perception. The instrument used in personality assessment was the *Myers-Briggs Type Indicator* (MBTI). Following initial testing, all subjects were given 6 weeks of reading training in order to compare gains in reading to specific personality variables. In all, the subjects tended to be sensing, feeling types who preferred to approach the outer world with a judging attitude. There existed little difference regarding preference for introversion/extroversion. After the training period, subjects were retested with *Stanford*, and z tests were used in comparisons. Feeling thinking was significantly related to achievement in the program. Subjects who preferred intuition included significantly fewer poor readers, but they did not make significantly more reading gain than those who preferred sensing. Subjects who preferred feeling included fewer poor readers and made significantly more reading gain than subjects who preferred thinking. Tables and additional discussion are provided by the author.

Trachtman (548) investigated the relative efficiency of a variety of academic and personality measures in predicting college achievement of 106 freshmen in a special compensatory program. Measures included reading (*Cooperative English Test*), math (*California Achievement Test*), dogmatism (*Rokeach Scale*), alienation (*McClosky-Scharr Scale*), attitudes toward authority (*Bales and Couch Scale*), internal-external locus of control (*Retter Scale, Crandall et al. Scale*, and Gurin's addition), and self concept and self-esteem (*Tennessee Scale*). Reading and math, as expected, correlated highly with the criterion of grade point index. *Crandall's Scale* also had a moderately high correlation with the criterion. Measures of dogmatism, alienation, attitudes toward authority, and Gurin's internal-external locus of control items had high negative correlations with the criterion. Correlations are reported and results are discussed.

Beatty (41) examined the effects of an 18-week basic skills training program on hard core unemployed workers (MCU) hired by an insurance company. Achievement measures were obtained with the *Stanford Achievement Test*, clerical skill with the *Minnesota Clerical Test*, and self concept of social adequacy with a modified version of the *Self-Esteem Scale*. The dependent variable, job success, was measured both by job performance evaluations and by weekly earnings. Job performance evaluations were measures of actual behaviors necessary for successful job performance as well as measures of the frequency of the behaviors. All of the predictors were administered at the beginning and end of the training program. Scholastic achievement and clerical skill improved significantly during the training period, but self-esteem did not. Nor was self-esteem significantly correlated with any of the measures of job success. However, scholastic achievement and clerical skill significantly correlated with job success. Additional results are presented along with the author's conclusions.

Bauer (38) explored the effects on IQ scores of varying test instructions, test anxiety, and locus of control in fifth graders. Subjects were given one of 3 sets of instructions before taking the *Kuhlmann-*

Anderson IQ Test; some were told that it was an IQ test, some were told that it was an achievement test, and some were told that it was just another "routine" test. All subjects were also administered the *Test Anxiety Scale for Children* and the *Intellectual Achievement Responsibility Questionnaire* (a measure of locus of control in academic achievement situations). Results indicated no significant effects for type of instructions. The only significant effects ($p < .05$) were for anxiety in boys and girls and for locus of control in boys alone. All high anxious subjects and all externally controlled boys performed significantly less well on the *Kuhlmann-Anderson*. There were also significant differences in favor of boys and girls who were, in combination, low anxious and internally controlled when compared to high anxious and externally controlled boys and girls.

Kennelly and Kinley (290) studied the relationship between academic performance, perception of teacher administered reinforcements, and locus of control for 49 grade 6 boys. The teacher Contingency of Reinforcements Questionnaire was constructed to assess subjects' perceptions of their teachers' delivery of reinforcement. The Intellectual Achievement Responsibility Questionnaire (IAR) was used to assess locus of control. Academic achievement measures included the *Iowa Tests of Basic Skills* administered at the end of the previous year and the average of report card grades. Coefficients of correlation of .32, .37, and .35 were found for the Iowa Vocabulary, Reading Comprehension, and Language Skills respectively with the scores perceiving the teacher as contingently punitive to boys. IAR scale scores were significantly and positively related to the 3 subtest scores of the Iowa referred to.

Brandt (57) examined relationships among reading comprehension, reading rate instruction, and internal-external locus of control in 55 college students. Subjects were assigned to experimental groups: a controlled instruction group in which subjects used an SRA Reading Accelerator and were told to increase reading rates by 15 per cent whenever they scored 70 per cent or more on a comprehension test; a group instructed with a motivated approach comprised of warm-up readings and a procedure where they increased amount read by 20 per cent at each interval, and controls. The controlled and motivated conditions were seen to vary in the degree to which they were oriented toward the external or internal dimension of locus of control. Subjects were administered the *Nelson-Denny Reading Tests* and subtests from the *Robinson-Hall Reading Tests*, both before and after treatments. Single factor analyses of variance and correlations were used in data analyses. Groups receiving the motivated reading instruction increased their rate significantly more than the controlled reading instruction and non-specific (controls) reading instruction groups. There were no changes in comprehension. The hypotheses concerning the association of the I-E dimension and performance in controlled and motivated reading-rate instruction were not supported.

Ramanaiah, Ribich, and Schmeck (451) explored the relationship between internal-external locus of control and study habits in 253 college students. All subjects were administered Rotter's *Internal-External* (I-E) scale and similar scales measuring personal control and political control. In addition, all subjects were administered the *Survey of Study Habits and Attitudes* (SSHA). Multivariate analyses of variance and correlations were utilized in data analyses. Analyses of sex differences indicated that females scored significantly higher than males on 3 of the SSHA scales: delay avoidance, work methods, and education acceptance. On the basis of total I-E scores, internal males scored significantly higher than external males on delay avoidance, teacher approval, and education acceptance scales; female internals outscored externals on work methods, teacher approval, and education acceptance scales. Similar results were obtained on the personal control scale: Males did not differ on the political control scale, while females high in political control outscored their counterparts on work methods. Additional results and discussion are provided by authors.

Prociuk and Breen (445) conducted a study in which the relationship between certain personality variables and study habits was investigated in college students. Levenson's measure of locus of control (including Internal, Powerful Others, and Chance scales), the *Survey of Study Habits and Attitudes* (SSHA), and students' grade point average were correlated; and the correlations were tested for significance. The correlations obtained between the SSHA and the 3 locus of control measures were as follows: .47 ($p < .01$) for the Internal scale, -.24 ($p < .05$) for the Powerful Others scale, and -.40 ($p < .01$) for the Chance scale. Correlations between GPA and the 3 locus scales were .28 ($p < .01$), -.09, and -.24 ($p < .05$), respectively. Locus of control scores and GPA correlated such that persons who believe in chance control perform poorer academically than persons who perceive their reinforcements to be a function of powerful others.

The purpose of a report by Drummond, Smith, and Pinette (141) was to determine if the internal-external control construct was related to students' achievement in an individualized community college reading course. Subjects were selected for the study on the basis of their scores on the 29-item *Internal-External Scale*. Students who marked 8 or less external choices were considered internal-control oriented; students who marked 12 or more external choices were considered external-control oriented. Fifteen students were identified for each group. The *McGraw-Hill Reading Test* and the vocabulary section of the *Nelson-Denny Reading Test* were given at the beginning of the 12-weeks' instructional period. Alternate forms of the same tests were administered at the end of instruction. Individualized programs were assigned to each student based on his test results. Students worked on their reading programs 3 hours a week for the 12 weeks. Adjusted mean scores of the external-oriented group were significantly higher than those of the internal-oriented group for both reading measures.

IV-16 Socio-cultural factors and reading

Kohn and Cohen (305) studied preschoolers and first graders in an attempt to determine the relationship among emotional, socioeconomic, and achievement variables in 323 preschoolers in New York City who were followed-up after they entered first grade. Preschool measures included 1) *Kohn Social Competence Scale* (Interest-Participation versus Apathy-Withdrawal), 2) *Kohn Problem Checklist* (Cooperation-Compliance versus Anger-Defiance), 3) *Day Care Behavior Rating* (Overall Functioning),4) *Day Care Referral Rating*, 5) *Verbal Fluency Rating*, and 6) and index of family stability obtained from interviews with parents. First grade measures included 1) *Peterson Problem Checklist* (Personality Problems and Conduct Problems), 2) *Schaefer Classroom Behavior Inventory* (Extroversion versus Introversion, Love versus Hostility, High versus Low Task Orientation), 3) *Elementary School Behavior Rating*, 4) *Elementary School Academic Rating*, and 5) the *Metropolitan Readiness Test*. A hierarchical multiple regression technique was used in data analysis. Findings indicated an absence of significant correlations between Social-Class and Race-Ethnicity and first grade social-emotional functioning. Findings were consistent for academic measures such that lower-class subjects and minority subjects performed most poorly. Data indicated longitudinal persistence in emotional impairment on the Apathy-Withdrawal dimension, which predicted first grade underachievement. The authors include and discuss additional findings.

Preliminary findings from a cross national questionnaire study of factors related to reading achievement and reading disability were presented by Blom, Jansen, and Allerup (48). A 162-item questionnaire was the basis for the data. Returns were received from respondents in Denmark, England, Finland, France, Greece, Iceland, Ireland, Norway, Scotland, Sweden, United States, and West Germany. Questionnaire items were assigned to 6 groups or factors: 1) language, 2) country, 3) school, 4) teacher, 5) pupil, and 6) family. Profiles were developed for each country within each of the 6 factor areas. Cluster analysis was then used to determine if a group of countries could be identified as having similar profiles. Cluster analysis on the 17 items constituting the language factor revealed a group consisting of England, Germany, Scotland, and the US which were close to each other. France, Greece, and Ireland were "far away" or dissimilar from the group on this cluster. On 5 of the 6 factors, Finland belonged to the group. Language was the exception. France was far away from the group on 5 of the 6 factors. Eighteen items dealt with sex differences. Nine countries had higher dropout rates for boys. In 3 countries—Scotland, the United States, and France—dropout rates were equal for boys and girls. Teacher attitudes were unfavorable toward boys in Sweden, Denmark, the United States, and France. There were 5 items related to instructional stability. The greatest stability occurred in Germany, Norway, Iceland, and Sweden with the least stability in England and the United States.

Hansson (234) reported a number of findings regarding reading achievement and other variables from the IEA studies involving Swedish children. Children across nearly all grades were involved in the study. Although the percentage of children remaining in school has nearly doubled since 1970 in Sweden, no support was found for the assertion that this factor has served to hold back the best students in their academic progress. Large differences in reading comprehension were found favoring students in "theoretical" training as opposed to "vocational" training, and favoring students from culturally higher-status backgrounds. Within particular types of training programs, there were few differences in reading among students based on father's occupation. Sixty variables were further studied by the use of discriminant analysis as to their contribution to reading achievement; generally, lack of reading materials and interest in reading in the home contributed most often to poor achievement. Negative attitudes toward school and teachers were also highly associated with poor achievement in reading. Additional findings are presented and discussed.

Taiwo (535) reported the findings of a questionnaire survey of the reading and literature programs in 80 Nigerian schools. A number of questions were asked, all of which cannot be included here. Form 3 pupils were reported to have read an average of 4 books in forms 1 and 2; prose was the literary form deemed easiest to teach and liked best by pupils; most respondents (N=52) felt that pupils preferred books by African authors to those written by foreign authors.

Yule, Berger, Rutter, and Yule (597) studied differences among children born in the United Kingdom, born overseas, and born in the U.K. of immigrant parents. Children in the sample averaged 10 years of age; country of birth, father's occupation, country of parents' birth, and child's attendance in any special reading program was recorded. All subjects were administered 2 group tests: 1) a 100-item test of non-verbal intelligence, and 2) a 48-item sentence reading test. A selected subpopulation of the original sample was further administered 2 individual tests: 1) a short form of the *Wechsler Intelligence Scale for Children*, and 2) *Neale's Analysis of Reading Ability* (Accuracy and Comprehension of reading). Half of the subjects taking the individual tests were born overseas, while the other half were children of immigrants. Considering the total sample, indigenous children scored well below national norms on the group tests. Overall, girls tended to score slightly above boys on both group tests. Immigrant children and children of immigrants were significantly below indigenous children on both group tests. On the individual measures, children of immigrants scored significantly higher on all individual tests than children born overseas. Additional findings, tabular information, and discussion are presented.

Home environmental factors and their relationship to reading was the focus of several reports. Maternal language style, maternal teaching style, children's daily schedules, and home prereading activities were studied by Miller (391). Seventeen middleclass children, 13 upper-lower-class youngsters, and 10 lower-lower-class children were followed from kindergarten into grade 3. In kindergarten, the 4 main types of data were gathered in home interviews with each mother and child. In October of their third grade year, subjects were given the Word Meaning, Paragraph Meaning, and Word Study subtests of the *Stanford Achievement Test*, Primary II Battery (SAT). Correlation coefficients were then obtained between the scores on the SAT and the variables obtained in the home interviews. For upper-lower- and lower-lower-class children, no significant relationships were noted with any of the 6 language variables and reading achievement test scores. For the middleclass sample, a coefficient of .55 ($p < .05$) was found between the Word Meaning subtest score and the language variable, Complex Verb Preference. For the total group, statistically significant coefficients of correlation between .31 and .44 were found for Word Meaning with Mean Sentence Length, Complex Verb Preference, Verb Elaboration, and Adverb Range. Coefficients of .31 and .32 were found for Paragraph Meaning with Adverb Range and Complex Verb Preference, respectively. Coefficients of .49 and .58 were found between Word Meaning and middleclass and upper-lower-class maternal teaching style, respectively. No significant relationships were noted between reading test scores and children's daily schedules. The only significant relationship for Home Prereading activities was a .64 coefficient between Paragraph Meaning at the lower-lower-class level.

The major focus of the investigation by Koppenhaver (309) was to study the relationship between various home environment factors and the reading achievement of grade 5 children. A random smple of 30 high-achieving and 30 low-achieving readers was selected. A common background with the exception of reading achievement was assumed. Specific procedures and test information are not reported. However, the author states that the quality of home environment was positively related to reading achievement scores. The 6 subscores of academic environment were 1) climate for achievement motivation, 2) opportunities for verbal development, 3) nature and amount of assistance provided in overcoming academic difficulty, 4) level of intellectuality in environment, 5) kinds of work habits expected, and 6) activity level of significant individuals in the environment. The 3 subscores of intellectual environment were 1) stimulation provided for intellectual growth, 2) opportunities provided for and emphasis upon verbal development, and 3) provision for general types of learning in a variety of situations. No significant differences were found in mean scores for either academic or intellectual environments of homes when pupils were grouped on the basis of intelligence into high and low groups. With IQ held constant, no significant sex differences were noted for scores on academic and intellectual environments.

Parents' child rearing practices were investigated by Barton, Dielman, and Cattell (37) to note their relationship to academic achievement. A total of 224 mothers and 169 fathers completed the *Child Rearing Practices Questionnaire* (CRPQ). In addition to school grades in almost all areas, standardized achievement tests in social studies, science, mathematics, and reading were given to the sixth and seventh grade children involved. Regression analyses were performed for each of the grades and for achievement test data with the CRPQ scores as predictors. Mothers' and fathers' scores were analyzed separately. A CRPQ factor which was identified as low use of rewards and praise was significantly correlated with a high score in reading for mothers. For fathers, early authoritative discipline and high praise or rewards were both negatively related to academic achievement in all areas.

Dill, Bradford, and Grossett (133) examined various indices of school achievement by black children who had attended different kinds of preschool programs in order to evaluate the effects of the programs.

Children had experienced developmental day-care, custodial day-care, Head Start, or no preschool program. Data were collected for 3 years of day-care graduates from school records and coded along 4 dimensions: demographic variables, school status and attendance information, personal-social behavior ratings, and academic achievement as assessed by the *Metropolitan Achievement Test*. At grade 2, developmental day-care pupils obtained significantly higher Vocabulary, Comprehension, and Reading scores than both the custodial and the control group (no preschool), but they were higher on only the Comprehension subtest when compared with the Head Start group. At grade 3, developmental day-care children again obtained significantly higher scores than the other groups on both the Comprehension and Reading subtests but not higher than the Head Start group on the Vocabulary subtest. In second grade, 55 per cent of developmental day-care children were reading on grade level as compared with 41 per cent of Head Start, 34 per cent of custodial day-care, and 13 per cent of control children. At grade 3, figures for those reading at grade level were 34 per cent Head Start, 33 per cent developmental day-care, 14 per cent custodial day-care, and 5 per cent control.

Clay (90) tested oral language, visual perception of print, reading progress, and auditory memory in her study of various groups in New Zealand over a 2-year period. Children included in the study were urban Maoris, urban Western Samoans, and 2 groups of all-white children; the mothers or fathers of one of the all-white groups were professionals. Tests of Maori and of Samoan language were administered by native speakers to tap the child's understanding of his native language. Urban Maori children were found to have no control of the Maori language, whereas 75 per cent of the Samoan children had good control over their tongue. The language variables tested for all groups were articulation, vocabulary, inflections, and sentence repetition. Auditory memory was for digits and random words. Visual perception of print was assessed by letter identification and knowledge of the conventions of written language. Word reading and sentence reading were tested as error and self-correction oral reading behaviors. When the top and bottom 25 per cent were selected on the basis of their level in the basic reading series, the professional group filled twice the expected number of places in the high progress group and the Maori children, twice the expected number in the low progress groups. Samoans were spread in the same proportions as the average white children. Samoan children were very similar to the average white children in reading test scores after 1 and 2 years of instruction. At ages 6 and 7, Samoans had higher scores than Maoris. All groups made large gains in oral language test scores of English between the ages of 5 and 7. For all groups, there was little correlation between oral language and reading scores until ages 6.6 or 7.0. Scores on visual perception of print were highly correlated with reading progress for all 3 language groups after 1 year of instruction.

IV-17 Laterality and reading

Clay (91) observed and recorded the developmental progression of hand behavior while reading for a set of 5-year-old quadruplet girls. One was left-handed and 3 were right-handed. After 2 weeks in school, 1 right-handed subject and the left-handed subject were consistently using 1 hand for pointing to caption book texts. Of the other 2 subjects, 1 reached this stage at 4 weeks and the other at 5 weeks. Behavior was not specifically trained in the classroom. After this initial period, the girls used their preferred hand consistently and without lapse to point to either right or left pages, regardless of text stimuli or placement of text on the page. At 12 weeks, the quadruplet making the best progress in reading—1 of the right-handed subjects—began to use either hand again. The change was in the direction of flexibility and this stage was reached by the other 3 subjects at 26, 38, and 46 weeks respectively. Several preliminary theoretical explanations for the observed behavior were offered in terms of bilateral nervous systems, handedness and reading, and perceptual strategies for visual analysis of stimuli.

Sixty children with reading ages 18 months or more below their CAs were compared by Thomson (540) with a control group who had average or above average reading ages or laterality. The 120 subjects were from 4 primary schools. The *Schonell Graded Reading Test* was used to determine reading age. Children were asked to perform twice the items on a laterality test. Inconsistencies in different aspects of laterality were found, making connections between laterality and attainment complex. However, showing a complete set of unilateral characteristics was the best predictor of reading attainment.

Thomson (541) presented dyslexic children and a control group with dichotic listening tasks involving digits, words, reversible words (*saw, was*), similar words (*big, pig*), and reversible nonsense syllables (*mag, gam*) and compared their performance. The 20 children in each group were matched individually for age, sex, socioeconomic status, and IQ. The experimental group consisted of children who had been referred to a diagnostic clinic for dyslexic-type language difficulties and had an average reading retardation of 2.5 years and an average spelling retardation of 3 years. Control group children were, on the average, 1 year ahead in both areas. The control group showed right-ear superiority effects for digits, words, reversible words, and similar words. The dyslexic group showed no difference or a left-ear superiority for these tests, and a right-ear effect for the nonsense syllables.

IV-18 Reading interests

Kirsch, Pehrsson, and Robinson (297) explored the reading interests of first and second graders from 10 countries. Children in the sample were administered the *Goodenough Draw-A-Man Test*, were interviewed regarding reading interests, and teachers judged their reading levels. In terms of reading interests, 3 main elements were studied: topical interests of subjects, classification of topics (information-scientific, information-historic, information-1970's, realistic fiction, imaginative fiction, humor, and poetry), and the derivation of the child's reading interest. First graders chose fictional topics 78 per cent of the time and non-fictional topics 22 per cent of the time. A total of 10 topics reflected 89 per cent of the expressed reading interests of first graders. Second graders chose fictional topics 64 per cent of the time and non-fictional topics 36 per cent of the time, demonstrating a marked increase in requests for factual reading material. Breakdowns and rankings by topic choices and countries are provided. Topics were then placed in the 7 prearranged categories, and chi-square analyses were conducted. Findings of these analyses indicated significant ($p<.01$) differences in reading interests of children from different countries, between first and second graders, among IQ groups, and among reading level groups. (Many analyses were repeated with only the US sample, and these results are reported separately.) No sex differences in reading interests were reported for the 10-country sample; however, the US sample demonstrated significant sex differences at both first and second grade level. Trade books, television, and personal experiences accounted for most of the derivation of reading interests.

An investigation of children's responses to fantasy in literature was conducted by Harms (236). A stratified random sample of 30 girls, ages 5, 7, and 9, from a middleclass school was used for the study. The author used a conceptual framework based on Piaget. Thus 5 year olds represented the preoperational stage; 7 year olds, a transition stage; and 9 year olds, the concrete operational stage. Individual interviews with children were conducted following the investigator's reading of 2 books of modern fantasy for children. The interview involved 3 parts: concepts of fantasy and realism, shifts in fantasy and realism, and concepts of causality in fantasy. Data were analyzed in relation to characteristics of intellectual development and as to completeness and correctness of responses. Five year olds gave more incorrect responses than older children, were unable to identify shifts in fantasy and realism while older children could do so, and are beginning to understand concepts of causality in fantasy, while older children generally had these concepts.

Lamme (324) presented findings of a 3-year study of the reading habits of intermediate grade pupils. The subjects had moved from a self-contained grade 4 setting to departmentalized fifth and sixth grade classes. Reading habits were measured by having subjects fill out a record for every book read. Records were collected every 2 weeks and asked for information on where the book had been obtained, who had recommended it, whether it was paperback, whether the reader had read it before, and whether the reader had ever read another book by the same author. In addition, informal yearly interviews were held with each pupil. The Reading Comprehension Section of the *Iowa Tests of Basic Skills* showed a mean grade level score of 4.5 in October of grade 4 for the 4 self-contained classrooms involved. The mean number of books read in grade 4 was 22, with a range from 12.2 to 36.7 reported as means in the individual classrooms. Almost 2/3 of the books read were taken from the school library with about 1/5 reported as being from the class library. Pupils reported that 22.2 per cent of the books read had not been recommended by anyone; 11.9 per cent were recommended by the librarian; 7.9 per cent by a friend; and 7.8 per cent by a teacher. In grade 5, when pupils attended departmentalized classes, the mean number of books read was 20.1. One of the 4 classes had been homogeneously grouped for reading. The mean number of books the children in this class reported reading was 22.6 as compared with 21.4, 19.6, and 17.0 for the heterogeneously grouped classes. In grade 5, 83.1 per cent of books read came from the library with only 3 per cent reported as coming from the classroom library. Of the books read, 74.1 per cent were not recommended by anyone. In grade 6, pupils were grouped with good readers in 2 classes and poor readers in the other 2. The mean number of books reported as read by the total group was 20.6. Individual classrooms reported means of 15.6, 22.1, 22.4, and 21.4. The school library continued to be the primary source of books with 67.4 per cent of the books reported as coming from there. The classroom library supplied 8.7 per cent of the books read. In grade 6, 70.8 per cent of the books reported were identified as not having been recommended by anyone. The proportion of paperback reading increased from 8.6 per cent in grade 4 to 23.3 per cent in grade 6.

Aaron, Miller, and Smith (2) studied reading interests and tastes of delinquent adolescent boys. Subjects were randomly selected from 450 in a Georgia offender center. Interviews determined the extent of book completion as well as the following data: 1) the relationship between method of book selection and percentage read, and 2) the relationship between books selected and books completed by categories. In addition, library checkout records were used to establish the most popular fiction titles and the most popular biography read. The results indicated that 44 per cent of the subjects interviewed completed the books they checked out. The major method of book selection (74.4 per cent) was directly from the shelf with librarians, teachers, and friends helping in the selection 8.5 per cent, 7.3 per cent, and 7.3 per cent of the time respectively. When the method of selection was from the shelf, 44.3 per cent of books were completed. Books selected with the help of the librarian showed a 71.4 per cent rate of completion; books selected with teacher aid, 66.7 per cent completion rate. The classifications with the highest rate of completion were fiction and biography. Title listings suggested that reading interests of these boys paralleled the interests of all adolescents.

McCreath (372) observed and described the reading interests and usage patterns of college students enrolled in a reading improvement course. Subjects were administered a questionnaire assessing general reading activities and attitudes, as well as preferred reading topics. Using the grade 13 percentile norms of the *Nelson-Denny Reading Test*, reading ability of all subjects was measured so that a gain score over the course of a semester could be computed. Results indicated 58 per cent of the subjects rated themselves as either *sometimes* or *never* involved in the reading activities assessed. Most of the reading reported was of magazines and newspapers. Attitudes toward reading, however, remained positive. A trend emerged in the interest patterns of subjects in that they preferred to read about current topics involving contemporary people. Topics regarding self-improvement and special interests were also mentioned often. Correlations were computed among reading habits, interests, and improvement; however, none reached significance.

Smith, Drummond, and Pinette (515) looked at differences in reading attitude and knowledge of reading techniques between high and low ability community college students. Students who scored below the college norms on the *McGraw-Hill Reading Test* were placed in a special reading course and, for the purposes of this study, considered to be low ability readers. All subjects were administered 38 items from *The Readers Inventory*, a measure of interests, attitudes, and knowledge of techniques in reading. Significant differences between the 2 groups were found on 6 items, 5 of which were specific measures of interest in and attitude toward reading, in favor of the high ability subjects. Low ability subjects also found concentrating while reading to be a difficult task. On other items from the inventory, the 2 groups did not differ, indicating that both possessed similar knowledge of techniques of reading and studying.

An indirect measure of attitudes towards reading and books was developed by Dulin and Chester (143). The eleventh grade students used as subjects were presented with 30 statements dealing with reading. The statements were paired and so constructed that one in each set of 15 contradicted the other. Subjects reacted to each statement on an 11-point scale, running from -5 through 0 to +5. The scale was based on the premise that subject's ratings of the plausibility of the pro and con arguments presented would correlate highly with directly-measured attitudes toward reading. In addition to the 30-item scale, students were instructed to reply to 3 self-rating 5-point scales dealing with how much they liked to read, how much they read, and the degree to which they valued reading as an activity. In addition, teachers of the students were asked to rate each subject on a 5-point scale in terms of how well the teacher thought he read, how much the teacher felt he read, and how much the teacher felt he liked to read. Correlation coefficients were computed between the total group's scores on the 30-item scale and the scores on the 3 self-rating scales as well as the 3 teacher-judgment scales. The highest coefficient obtained was .205. Subjects were then sorted into 5 groups on the basis of the self ratings. Plausibility-judgment score means (30-item scale) and standard deviations for each group were computed and an analysis of variance was run. Significant differences were found between the lowest attitude group and the 2 above it.

The purposes of the report by Angelotti, Behnke, and Carlile (11) were twofold: 1) to determine whether 2 types of literary material differed in the reader involvement evoked, and 2) to determine whether the perferred material produced a greater decrease in heart rate response than the less preferred material. Greater involvement was denoted by decelerated heart rate. The 20 seventh grade males were fitted with heart rate telemetry devices and presented with 2 reading selections. The materials were about equal in length and difficulty. One was a science-fiction short story created by the authors; the other selection was taken from a history text. Post experimental interviews were conducted and revealed that all subjects preferred the science-fiction selection over the historical account. Heart rates during the reading of science-fiction were significantly lower (.01) than during the reading of history. Other findings suggested that degree of involvement is differentially affected by specific segments of the story.

IV-19 Readability and legibility

Singer (506) described the validation of a judgmental procedure for estimating readability level, the SEER formula (Singer's Eyeball Estimate of Readability), which uses paragraph matching as a basis for determining readability without computation. Readability levels of 2 paragraphs at each grade level from a sample of children's literature were computed by the Spache formula for grades 1-3 and by the Dale-Chall formula for grades 4-6. One paragraph taken from each level formed Standard Scale I. The remaining paragraphs, arranged in random order, became the passages of unknown difficulty for subjects to match with the scaled paragraphs. A second scale, Standard Scale II consisted of paragraphs taken from Spache's *Diagnostic Reading Scales*. Scales I and II were randomly distributed to a group of 32 education majors. All subjects were given the same set of unknown paragraphs and assigned the task of matching the unknown paragraph to their Standard Scale I or II. Chi square tests of significance of differences between the observed (SEER levels) and the expected (computed levels) were not significant at the .05 level. Singer noted that, although not significantly different, the differences between the computed vs. the Fry graphed levels of readability were greater than the differences between the computed and SEER scores for the unknown paragraphs. The author recommended that selection of an accurate judge be based upon ability to match the unknown paragraphs with Standard Scale I or II with an average difference less than 0.5 for the 8 paragraphs.

A chart of estimated readability levels was developed by Burmeister (68) as a simplified procedure for the revised Spache Readability Formula. The chart is employed only after the average sentence length and the per cent of hard words are obtained for a given passage using Spache's procedures. To obviate the necessity of using a formula to calculate the readability estimates, the chart provides the same information by locating on the chart the point of intersection between the variables of average sentence length and per cent of hard words.

An effort to modify the Fry readability formula was undertaken by Kretschmer (311) to correct for inflated syllable counts due to the inclusion of common words having 2 and 3 syllables—words such as *anything* and *every*. It was believed that the Fry formula produced inflated values in the readability ratings of high school materials. For correcting the problem, a small corpus of 50 common words of 2 and 3 syllables was identified; and these words were recommended to be treated as 1-syllable words in the calculation of the Fry formula in order that the inflationary effect of easy multi-syllabic words on readability ratings would be negated. Three passages were used in a study to compare the readability estimates based on the Fry formula with and without the correction procedure and the Dale-Chall or Spache formula. All passages to be assessed were written by the author. From the comparison of the different readability ratings of the passages, the correction procedure of the Fry method produced estimates that were more in line with the estimates of both Dale-Chall and Spache techniques than were the estimates based on the original Fry formula.

Miller (389) attempted to cross-validate 2 cloze derived readability equations. The equations were Coleman's Formula 4 and Bormuth's Machine Computation Formula. The Coleman equation was based on the experimental passages used in validating the Miller-Coleman Readability Scale. Bormuth's equation was based upon the *Bormuth Cloze Reading Comprehension Test*. Each formula was applied to each passage used in the cross validation. Results indicated that the scores obtained from both formuli correlated significantly with subjects' scores on each test ($p < .001$). Additionally, each formula resulted in similar coefficients on both Miller-Coleman tests (the 600 and 2,400 response versions). Finally, the Bormuth formula resulted in a significantly ($p < .001$) higher validity coefficient on the Bormuth test than did the Coleman formula.

Miller, Coleman, and Aquino (390) presented corrections to a readability scale devised in previous research. The readability scale involved 36 passages for which experimental subjects' performance was reported, this being the index of readability. In an earlier research report, passage scores were reported in error. These scores were repeated in the present report in corrected form.

Hartley, Fraser, and Burnhill (242) explored various instruments used for assessing subskills of reading in regards to their reliability as measuring instruments. Procedures of the study involved giving a number of reading tests to college and elementary school subjects. Basically, the authors provided the subjects practice in performing the tasks, then calculated reliability between scores from the second and third obtained scores. On all experimental materials, typography was held constant and difficulty level of the reading material was tailored to the ability of the readers. Measures of oral reading were among the most reliable in the study. Measures of silent reading speed were also reliable; however, the authors point out a number of factors that influence the reliability of measures of silent reading rate. Measures of scanning for retrieval of information also tended to be highly reliable. Measures of reading comprehension where cloze tests are used as the index of comprehension were observed to be unreliable. Tables and extended discussion are provided by the authors.

Denbow (123) tested the comprehension of college students under listening and reading conditions. The normal reading group was asked to read reproduced versions of typed news stories in 1 and one-half minutes in their usual manner. The paced group read the news stories 1 sentence at a time by means of a slide projector for a total of 1 and one-half minutes for the entire story. The oral group heard a tape recording for a total of 1 and one-half minutes. Both groups were permitted the same length of time for each sentence. The control groups received irrelevant news stories by means of a normal written procedure. Two versions of the same news story—one difficult and one easy, according to results of the Dale-Chall formula—were the experimental selections. A pretest and a post test were administered to all groups. No significant interaction was found between readability level and mode of presentation, but within each readability level, each modality evidenced a greater comprehension increase than did the control group.

V. *The teaching of reading*

V-1 Status of reading instruction

A survey of the 50 states was made by Scranton and Downs (494) to ascertain the current status of elementary and secondary learning disabilities programs. Considerable differences were found between the elementary and secondary programs as well as among the states in terms of level of state-wide support of programs. Included in the report is a summary of opinions by state education department officials as to the reasons for differences in the development between elementary and secondary programs for the learning disabled students.

A questionnaire was used by Gillespie, Miller, and Fielder (198) to survey current state legislation relating to identification, assessment, and placement of learning disabled children. More specifically, the questionnaire focused on terminology used by each state, definitions given for each term, and different aspects of the identification process. A return rate of 60 per cent was achieved from among the 50 states who were sent questionnaires. Information was obtained from remaining states by telephone. In summary, the results disclosed that differences exist among state laws concerning what constitutes a learning disability. In all but 2 states, a student must fit the description of learning disabilities employed by the state to receive special services provided by state monies. Presented in the report for each state are detailed findings of the survey showing terms used, definitions of terms, and specific personnel and procedures employed for identification, assessment, or placement.

A national survey of college and university learning and study skills programs was conducted by Smith, Enright, and Devirian (510). Of the 3,389 compuses that were sent a questionnaire, 1,258 or 38 per cent responded. The survey instrument consisted of 70 questions on administration, budget, staffing, facilities, and materials. The data collected were categorized by region, institutional level, student-body size, and type of institution. Learning and study skills centers were further classified by program type. A variety of findings was reported. Among the findings: 61 per cent of the responding institutions declared that they had a learning study skills program, and an additional 9 per cent indicated plans to develop a learning center. Analysis by type of institutions revealed that 78 per cent of 2-year colleges reported having centers, compared with 57 per cent of post graduate institutions and 43 per cent of 4-year colleges. Data did not reveal any pattern of administrative responsibility for learning centers at the institutions, and over 60 per cent of all centers administered their own departments. Insofar as credit is concerned, 65 per cent of the respondents reported that their institutions give credit for reading and study skill courses.

Eight counties of Western New York were surveyed by Hill (254), using a questionnaire to determine the reading activity in secondary schools of the area. The questionnaire defined reading activity as "any regularly provided, faculty directed reading instructional programs of a minimal 6-week length." Surveyed were 202 schools of varied sizes and with grades 7 through 12. A total of 172 schools responded for an 85 per cent return. It was reported that 77 per cent of the responding schools indicated reading activity during the 1973-1974 school year. This activity was related to organizational patterns in school and to public-private affiliation. Neither school size nor school location was related to the existence of reading instructional activity. All junior high schools reported some form of reading activity, but only 62 per cent of the senior high schools reported some organized reading activity. Eighty-one per cent of the public schools acknowledged reading programs, compared to 59 per cent of the private schools surveyed. It was found also that local administrative decisions and funding were key factors that influenced the existence of school reading programs.

Discussed in the report were types of instructional activity utilized by the schools, the role of content area reading instruction, and administration, staffing, and funding responsibilities.

A survey in North Bedfordshire, England, was conducted by Limmer, *et al.* (340) to explore opinions of classroom teachers on theory and practice concerning remedial reading. A questionnaire was used, and 63 replies were secured. Among some of the conclusions reached were that classes were not sufficiently small to eliminate the need for special provisions for remedial reading and that one teacher in a school be designated to have charge over the remedial reading program. Many teachers cited general language limitations as one of the principal factors contributing to learning difficulties in reading. It was believed that regular, and, if at all possible, daily help was required for children with reading problems.

Attending behavior of teachers and students during reading instruction to ascertain how they spend their time was recorded by Quirk, Trismen, Weinberg, and Nalin (449). In one study, data were collected on student behavior during the 1972-1973 school year on 9 separate days for 15 minutes involving 37 second grade classes, 18 fourth grade classes, and 8 sixth grade classes. A student observation scale was used to grade the recording of student behaviors during periods of reading instruction. In a second study, 135 compensatory reading teachers at grade levels 2, 4, and 6 were from 21 cities observed in 1975 and rated according to their mode of instruction used and the content of instruction. Among the many comparisons between teacher and student behavior, teachers were found to spend 30 per cent of their time in the management of instructional activities; and comparable student proportion was 13 per cent. Also, while the teachers were spending 26 per cent and 12 per cent of their time respectively on word recognition and comprehension activities, the students were spending 20 per cent and 7 per cent of their time, respectively, on these activities. A total of 23 per cent of student time was spent on non-reading instruction and extraneous matters.

V-2 Comparative studies

Nisbet, Welsh, and Watt (416) compared the results of reading surveys conducted in Aberdeen, Scotland, during the years of 1962 and 1972. They obtained a 99 per cent coverage of 8-year-old and 11-year-old pupils. The reading comprehension tests used were *NFER Sentence Reading Test* AD and Test NS 6. The differences between the 1962 and 1972 averages was small. In general, for the 8-year-old pupils, the average was slightly (but significantly) higher; at age 11 it was slightly and significantly lower. When the results are analyzed by social class, the average standard for children whose fathers were in professional or managerial jobs improved. The average performance for 11-year-old children whose fathers were in semi-skilled or unskilled jobs was clearly below that of a comparable social group in 1962.

McDonagh (374) compared the 1969 reading attainment of a representative sampling of 11 year olds in Dublin with findings from a 1964 survey. The 26 schools included in the 1969 sampling were randomly selected within 4 size categories. The *National Science for Educational Research NS 6 Reading Attainment Test* was administered in May of 1969. The 1964 administration had been used to restandardize the test and had a mean score of 100. In 1969, the mean score was 99.12. Mean score for boys in the 1969 survey was 98.93; for girls, 99.28. An analysis of variance of scores by school size showed no significant differences between the 4 categories.

Nicholls (413) reported the findings of a questionnaire survey returned from 23 infant schools, 26 junior schools, and 14 primary schools in Great Britain. Results were compared with findings from a survey conducted 3 years earlier. The survey focused on the use of tests. A total of 49 schools used published tests in the 1973 survey as opposed to 36 in the earlier survey. In primary and junior schools, over 70 per cent of schools reported the use of more than 1 test; at the infant school level, over 50 per cent of schools used no test at all. The *Schonell Word Recognition Test* was the test most frequently cited as being used in schools in both surveys.

At the University of Florida, each entering freshman class from 1960 through 1970 was administered the *Diagnostic Reading Test* (DRT), Survey Section. Larsen, Tillman, and Cranney (327) reported the results of scores on rate, vocabulary, and comprehension on the DRT over the 11-year period. Scores were compiled at the 5th, 25th, 50th, 75th, and 95th percentiles for each class. Scores at these percentile ranks were then subjected to the One Sample Runs Test to note significant, systematic changes. There was a slight but insignificant tendency for most raw scores to increase over the 11-year period. The raw score at the 50th percentile on rate increased from 250 words per minute in 1960 to 298 words per minute in 1970; in vocabulary, the raw score at the 50th percentile shifted from 45 in 1960 to 59 in 1970; in comprehension, the range in raw scores over the 11-year period at the 50th percentile was from 30 to 32.

V-3 Early reading

In their investigation, Hall, Moretz, and Statom (227) defined early writers as those children who learn to write prior to formal instruction in kindergarten and/or grade 1. The 18 subjects, ages 3 years 4 months to 6 years 1 month, attended nursery-kindergarten classes at Eastern University. The teachers of the preschool classes also identified the subjects using a Checklist of Writing Behavior. Data were collected through parent interviews lasting from 30 to 45 minutes. Findings on the home background indicated that most of the subjects' parents were college graduates. All parents reported that writing materials and books were easily accessible. Also noted among subjects was the desire to communicate, with most parents providing help at the children's request. The help requested most frequently was with letter formation, recording a child's dictation, and oral spelling of words. In 17 out of 18 cases, parents reported that interest in writing preceded interest in reading.

Clark (89) attempted to determine the particular strengths and weaknesses of children who learned to read at an early age without the assistance of the school. The criterion for inclusion in the study was that the child could read at least 25 words from the *Schonell Graded Word Reading Test*. Additional information regarding intelligence (*Wechsler Primary and Preschool Intelligence Scale*) and reading (*Neale Analysis of Reading Ability*) is included. Results are reported in the form of anecdotal observations and explanations.

V-4 Reading readiness

The academic performance of disadvantaged urban children was examined by Fesler, Guidubaldi, and Kehle (171) at the end of 1, 2, and 3 years to assess the effects of an individualized program. The special treatment focused on developing perceptual and motor abilities, language concepts, classifying skills and reasoning abilities including developing specific skills in reading and mathematics. Individualization was accomplished through diagnosis of pupil achievement using a content-referenced testing program. There was a total of 253 experimental and 61 control subjects who entered kindergarten in 1969-1972 and were tested yearly thereafter on a variety of readiness and achievement measures, including the *Metropolitan Upper Primary Reading Test*. Four analysis groups were created that involved both longitudinal and cross-sectional designs to cover the 4-year treatment period. Results of factor analyses of variance consistently favored the experimentals.

The effects of a reading readiness program on first grade readiness and later academic achievement was examined by Vincent, Bright, and Dickason (563) in a 3-year study of disadvantaged children. The special preschool program was designed by the Western Institute for Science and Technology (WIST) to utilize diagnostic and prescriptive procedures for the mastery of highly structured materials, systematic reinforcement, and student tutors. The tutors were eighth grade volunteers. Two hours a day were allotted to the program. Experimental groups included preschoolers attending a day care center, 20 during year I, 23 during year II, and 19 during year III in a public kindergarten. After each group entered first grade, an equal number of controls who had not attended formal preschool programs were randomly selected for comparison purposes. On entering the first grade, all subjects were given the *Metropolitan Readiness Test*. The *California Achievement Test* (CAT) was given to year II students on leaving the second grade and to year I students on leaving the third grade. Means and standard deviations for the experimentals and controls were compared and analyzed separately by means of a randomized design. With respect to first grade readiness, experimental subjects showed greater readiness than control subjects for years I and II ($p<.01$) but not for year II. With respect to later academic achievement, at the end of the second grade, there was no significant difference between year II experimentals and controls, but at the end of third grade, year I experimentals showed significantly greater ($p<.05$) academic achievement than controls.

Using an 80-page workbook, Carringer and Dobos (79) provided 40 hours of visual training over an 8-week period to 26 kindergartners from predominantly middle socioeconomic backgrounds. A comparison of pre-instruction and post instruction scores on the *Marianne Frostig Developmental Test of Visual Perception* (MFDTVP) showed improvement in visual-motor coordination and perceptual constancy and no improvement in figure ground perception as operationally defined by the MFDTVP. The investigators pointed out, however, that there was no control group and no IQ data.

The impact of Plaza Sesamo in Mexico was evaluated by Diaz-Guerrero, Reyes-Lagunes, Witzki, and Holtzman (130) on the learning skills of 4- and 5-year-old viewers. The sample was drawn from families of the lower-class, blue-collar, and rural economically deprived. During May and June, 1974, pretest data were obtained for 1,113 subjects on 16 tests. In phase 1 of the study, 1/2 of the children viewed

Plaza Sesamo while the other half watched cartoons. In phase 2—immediately thereafter—about 1/2 of the original experimental group watched a new version of Plaza Sesamo while the other half looked at cartoons. At the end of each phase, post tests were administered. Analysis of the data was carried out on the entire control sample separately for phases 1 and 2 of the experiment. Analyses of covariance were done separately for the 4 year olds and the 5 year olds. Comparisons of experimental and control groups were also made separately for the lower-class and blue-collar urban children and for the rural children. In sum, the findings showed generally negative results concerning the value of exposure to Plaza Sesamo for all children except the urban lower-class 4 year olds, who after 12 months of viewing Plaza Sesamo, showed a slightly greater gain than the controls on tests of general knowledge, numbers, words, and ability to sort. Otherwise, no consistent treatment effects were revealed by any of the criterion measures. These findings were different from the results of an earlier evaluation study.

V-5 Teaching reading—primary grades

Attitudes of first grade children in 2 reading programs were compared by Warren and Frederick (573) using an author-constructed modified semantic differential measure to assess attitudes toward reading. The semantic differential instrument consisted of 12 opposite adjectives that represented 3 concepts described as evaluative, potency, and activity. Respectively, examples given of adjectives that related to each concept were "nice/awful," "old/young," and "fast/slow" in the context of the question asked "How does reading make me feel?" A 3-division scale was constructed. The instrument was administered to 53 children in individualized programs and to 45 children in basal readers programs. At the completion of the test, the scales were grouped according to the 3 factors, and results were tallied for the evaluative, potency, and activity factors. Raw score means were obtained for each of the 3 factors, and the differences for significance between the mean scores were tested by reading program and by sex. From the finding, children who were taught in an individualized reading program showed more positive attitudes on the potency and activity scales than did the basal reader group. No differences were noted on the evaluative factors.

A system-wide program of 367 first and 351 second graders who created their own reading material through a process of dictating their thoughts, stories, or impressions was described by Smith (513) in a study of a Title III project in Lewiston, Idaho. The process was called

Communication Skills Through Authorship (CSTA), and the program was organized to allow children to dictate in a private setting and to provide personnel who type on a daily basis each child's oral recordings in a form of personalized readers. In addition to the CSTA program, the children were taught a synthetic phonics basal program. Results from the *Stanford Achievement Test* (SAT) were compared with expected scores as disclosed by test norms. On the Paragraph Meaning subtest, the first graders attained a 2.05 grade score and the second graders achieved a 3.11 grade score as compared with the expected norms of 1.9 and 2.9 respectively. Similar findings were noted in the performances on the other subtests of the SAT. The study did not include controls or statistical treatment of mean differences in the evaluation of the students' test scores.

A programed diagnostic-prescriptive reading program was evaluated by Peniston (434) in comparison with an open-classroom individualized reading program, using a total of 30 first graders as subjects. Reading achievement was measured on a pre-post treatment basis with the *California Achievement Test*. Instruction for the 2 treatment groups lasted approximately 9 months. Single classification analysis of covariance model was used to compare post test results while controlling differences in pretest scores. The analysis of data favored the diagnostic-prescriptive programed approach, although both treatment groups made gains from pretesting to post testing on the criterion variables.

A total of 37 Mexican-American bilingual fifth graders was retested by Trepper and Robertson (550) in a follow-up study on the effects of i.t.a. instruction on reading achievement a year and a half later. Another 255 children from the second, third, and fifth grades were also examined to ascertain the efficacy of i.t.a. on reading, mathematics, and school attitudes under current teaching conditions. All the subjects were drawn from 1 elementary school in East Los Angeles where 98 per cent of the student population is Mexican-American. For the retest group, no differences were found between the original i.t.a. and T.O. groups on mean reading scores of the *Comprehensive Test of Basic Skills* readministered 18 months after the i.t.a. and T.O. treatment. But there were significant mean differences favoring the i.t.a. over T.O. groups in grades 2, 3, and 5 on the post test measures given at the end of the school year. For the study, a team approach was employed in the instructional program during the school year.

The relationship between teacher behavior and pupil performance was analyzed by Alpert (9) in a study of 352 good and poor readers from middleclass families. The research was carried out in 17 second grade classes in 13 New York City Catholic schools that were randomly assigned to control or experimental conditions. The 8 experimental teachers were given specific behaviors to follow during the intervention period of 50 school days. These behaviors were related to providing more time for reading at the most favorable time of the day, more instructional material, fewer pupils per group, and "good" verbal responses. The list of teacher behaviors were developed by 39 experts and 3 reading specialists. The teachers in the control schools were not informed about teacher behaviors and pupil expectation. Different forms of the *Gates-MacGinitie Reading Test* were used as pretest/post test measures. Differences between mean scores of controls and experimentals were compared by analysis of variance. Among the findings reported, an increase in specific teacher behaviors judged as "good" did not produce an increase in the performance of poor readers.

The efficacy of tutor sex was analyzed by Gentile (193) on learning to read among 60 Mexican-American boys in grades 2, 3, and 4 of Casa Grande, Arizona. Ten male and 10 female tutors were randomly selected from an available pool provided by a federally and privately funded project. One-half of the male tutors and 1/2 of the female tutors were Mexican-American and the other half were Anglo. For 2 weeks the tutors were trained to construct and use materials from the National Reading Center's Right to Read Tutorial Program designed for use by paraprofessionals in the teaching of reading in the areas of decoding, comprehension, study and motivation skills. One subject from each of the 3 grades was randomly assigned to each tutor. For the experiments, the tutors worked with each subject twice a week in 1-hour sessions for a period of 8 weeks. Pretest and post test measures included different forms of the *Gates-MacGinitie Reading Test* (GMRT) and of the *Silvaroli Classroom Reading Inventory* (SCRI). Test data were treated in a 4-way multivariate analysis with repeated measures. Factors in the design were tutor sex, 2 levels; tutor ethnic group, 2 levels; grade level, 3 levels; and trial, 2 levels. A significant trial effect for both Graded Word Lists and the Comprehension subtest scores of SCRI was found for the total group. The tutor sex by trial interaction was not significant. But the tutor sex by grade by trial interaction was significant for the SCRI Graded Word List scores. More specifically, for the second grade, the female tutored group had a higher mean gain score than did the male tutored group. For the third grade, the male tutored group had a higher mean gain score. Practically no difference between the 2 tutor-sex groups were found at the fourth grade level; although the fourth graders made the greatest gain on both measures. Other findings were also disclosed in the report.

In an investigation of college student volunteers as interventionists for primary grade children, Alden, Rappaport, and Seidman (4) analyzed pre-program and post program school behavior and reading performance of kindergarten and first graders from poverty level families. Subjects were 32 black and 16 white children from 4 public elementary schools who were assigned randomly to one of 3 experimental groups. The 12 male and 12 female university undergraduate volunteers were randomly assigned to the treatment programs. The volunteers met with each of their pupils for 2 half-hour sessions per week over a 12-week time span, for a total of 24 sessions. For the structured academic treatment program, the volunteers tutored subjects on specific readiness and beginning reading skills. The second treatment—called the companionship program—focused on developing a warm relationship between the volunteer and the child with no systematic attempt to provide tasks involving the teaching of academic skills. The third group served as controls in a no-contact condition. One observational and 2 achievement measures were used to evaluate changes in children's behavior over the course of the program. A one-way analysis of variance was used to treat results from pre-performance and post performance on the *Metropolitan Reading Readiness Test*, an author-constructed *Sight Vocabulary Test*, and the 11 subscales of the *Devereux Behavior Rating Scale*. It was found that first grade pupils obtained significantly higher scores than did kindergarten pupils, but kindergarten children changed significantly more from pre-assessment to post assessment than did first grade children. At the kindergarten level, those in the structured reading program were found to improve no more than children who received no added attention; for academic performance, the companionship program children fell behind both the structured academic program and the no-contact children. For first grade children, the structured reading program was found to be more effective than the companionship program or a no-contact control condition.

The effects of 3 intervention procedures to increase academic achievement and levels of appropriate behavior of 48 primary grade subjects were compared by Walker and Hops (568). Subjects were selected in pairs from regular classrooms and one child from each pair was randomly assigned to one of the 3 experimental conditions. Experimentals received treatment in a special class setting, and controls remained in the regular classroom. The children were in the experimental classroom for approximately 4 hours and 45 minutes per day for a 10-week period. All 3 experimental groups received the same individualized remedial constructional program on basic skill development in reading and mathematics. However, a different set of response contingencies was applied to the behavior of the subjects in each of the 3 groups. Group 1 subjects were reinforced for behaviors facilitative of academic performance, Group 2 for correct academic performance, and Group 3 for both. The effect of the treatments were measured by the *Metropolitan Achievement Test* and the *Wide Range Achievement Test* in pretest and post test settings. Also prebehavioral and post behavioral observation data were collected for both experimentals and controls. Based on factorial analysis of means of appropriate classroom behavior and scores in reading and math, no significant treatment differences were found among the experimentals. However, there was a significant difference between experimental and control groups for reading achievement, math achievement, and level of appropriate behavior, all favoring the experimentals.

V-6 Teaching reading—grades 4 to 8

Evans and Towner (162) compared the reading of achievement of 24 fourth graders using sustained silent reading with the achievement of another 24 using practice materials as supplements to a basal program. The subjects were from 2 classrooms and were randomly assigned to one of the 2 treatment conditions. Both treatment groups were given 1 hour of reading instruction daily in the same standard basal reading program. Following each daily instructional period, the subjects were regrouped for 20-minute practice sessions. One group followed exclusively the practice of sustained silent reading with no interruptions. The other group used a selection of commercially available material for practice and reinforcement of reading skills taught. Two forms of the *Metropolitan Achievement Test* were used as pretest and post test measures. Results produced no significant mean differences in reading achievement between the 2 practice groups. Also no significant classroom or interaction effects were found using classroom by treatment analysis of variance.

The teaching of context clues was investigated by Askov and Kamm (18) in a study of 133 subjects as experimentals or controls in grades 3, 4, and 5 from 2 Bemidji, Minnesota, schools. Selected for teaching in the experimental school was cause-effect and direct description categories of context clues as outlined in the Wisconsin Design's *Teacher's Resource File:* Comprehension. The 2 types of context clues were taught systematically for 10 school days or for about a total of 4 hours. Teachers in the control school provided no special instruction in context clues during the same period. Form 1 and Form 2 of the program's criterion-referenced context clues tests were used as pretest and post test measures for both experimentals and controls. Six weeks later, both groups were again administered Form 1. Using an analysis of covariance, significant differences were found favoring the experimental school. Neither were significant differences found for total subjects between grades after adjusting for pretest scores, nor was there a significant interaction between grade and condition. The means obtained on the delayed post test disclosed that the significant gains made by the experimental subjects were maintained.

Gain scores in syllabication and reading comprehension measures were correlated by Marzano, Case, Debooy, and Prochoruk (362) for 275 students of a Colorado middle school. A relationship between syllabication and comprehension gain scores was hypothesized in the study as determining the value of teaching syllabication for comprehension improvement. The Syllabication and Comprehension subtests of the *Stanford Diagnostic Reading Test*, Level II, were administered as a pretest and a post test for the 1974-1975 school year. A Pearson correlation coefficient was computed between pairs of gain scores of the subjects. A correlation of .13 was obtained, indicating that 2 per cent of the variance in comprehension gain was predictable by gain in syllabication.

General trade book reading and direct instruction were compared by Meyer and Cohen (387) to ascertain the impact of the 2 approaches on vocabulary development as measured by standardized tests. Four Omaha, Nebraska, schools were used with 130 fourth graders who were divided randomly into 2 treatment groups under experimental conditions for 5 months. All subjects were below the 30th percentile on standardized tests and were enrolled in a Title I program. One group received heavy vocabulary training with little or no trade book reading, and the other group received heavy tradebook reading without direct vocabulary instruction. After the experimental period, the subjects were administered the Vocabulary subtests on the *SRA Achievement Test* and the *Stanford Achievement Test* for comparison purposes and dependent variables. The results showed no differences in mean raw scores between the 2 treatment groups on both standardized measures.

The use of reading guides as aids to student recognition of organizational patterns and interpretation of social studies text was evaluated by Vacca (555) in 2 separate studies using the same sample of students. Subjects were selected from a middleclass suburban school in central New York and included a total of 4 seventh grade classes. The reading strategy incorporated the use of prepared reading guides for small groups within the structure of seventh grade social studies lesson. Conducted over a 1-month's period of time, one study investigated a direct, skills-centered instruction in a reading class with a strategy of functional reading in social studies on how to recognize and use organizational patterns in commercial and teacher-prepared materials. Immediately following the first study, the second study was conducted over a 6-weeks' period to evaluate the extent to which the same functional reading strategy facilitated students' acquisition of content, the social studies reading achievement, and their general reading comprehension. Data were collected from student performances on standardized and author-constructed reading and social studies tests. It was found that the functional reading strategy not only appeared to have a significant effect on students' ability to recognize patterns of organization in expository paragraphs, but also seemed to influence positively their acquisition of social studies content and had a qualified effect on their achievement in reading social studies. There were no significant differences among treatment groups on a measure of general reading ability.

Improving study habits of low-achieving junior high school students was explored by Harris and Trujillo (240) in a report involving 2 treatment groups and 1 control group. One treatment group involved 36 experimentals on principles of behavior modification and in techniques of self-observation and behavioral change. The second treatment group involved 41 experimentals on the use of group discussions about study habits and study problems, with topics chosen and discussions led by the students with minimal guidance. No special treatment was given to the 36 controls. In the experiment, the criterion measures of behavioral changes in study habits of the subjects were by their grades and self-reports. The experiment was carried out during a 12-week period in the spring of 1974. From an analysis of variance of the grade point averages of the 3 groups, results indicated that both the self-management group and the discussion group showed an improvement in grades that was significantly different from the grades of the controls in favor of the experimentals. Also, based on results of self-reports from questionnaires, the self-management treatment was associated with more favorable responses relating to the improvement of study habits than was the discussion treatment or no treatment condition.

The television viewing habits, preferences, and opinions regarding television as an aid in reading were surveyed by Adams and Harrison (3) using 228 students in fourth, fifth, and sixth grade reading classes. Information obtained on the subjects by use of a questionnaire concerned the hours spent viewing television during the school week and on weekends, the amount of freedom given to watch television, the extent words are read on television as well as the value of reading words on television, the preference for homework assignments involving the use of television, and the identification of favorite television programs. In addition, subjects listed words they read while watching television. These words were then analyzed and compared to a popular reading vocabulary list. It was discovered that the subjects watched television on the average of 5 hours per school day, 8 hours on Saturday, and 4 hours on Sunday. About 1/3 of the subjects reported watching television as desired anytime and with freedom to watch any program. Nearly 1/2 the sample reported reading most of the TV words on screen, while 10 to 15 per cent didn't read any TV words. A high per cent of the subjects reported that TV reading helped in some way either in vocabulary building, spelling, or silent reading. One-third of the students recorded a total of 5,499 different TV words while watching television. Of the TV words, more than 50 per cent were found on the *Thorndike Remedial Reading Vocabulary List.*

Neville and Pugh (409) investigated the effects of the BBC Reading and Listening I series on improving reading performance on a cloze test. Two studies were carried out, both done with children between the ages of 9-2 to 10-1 and in the first year of middle school. Reading ages, determined by the *Holborn Test*, were below chronological ages. In the first study, 4 groups of 6 boys and 6 girls each were formed. The *GAP Reading Test*, administered in October, showed no significant differences for mean or variances of reading ages among groups. Two pairs of groups, matched by sex and reading age, were formed. One group was assigned training at the normal rate on the BBC tapes, and its pair acted as a control; the remaining groups consisted of a group assigned training at a rate from the original tapes and a control. Training was given on the tapes for 2 sessions weekly over 7 consecutive weeks. In the program, pupils follow a story in a book as they listen to the recorded version. The same story or a part thereof were used for both sessions in a given week. The experimental group sometimes utilized workbook exercises related to the BBC program. All groups continued remedial instruction. In the second study, 2 groups of 18 children were selected. The normal group showed reading ages about commensurate with their chronological ages, while subjects for the slowed group were selected to have reading ages below their chronological ages. In each group, 12 subjects were assigned to an experimental group and 6 to a control. Procedures were the same as in the first study, except that the teachers switched methods. Subjects in the first study were given an alternate form of the GAP test in December; subjects in both studies were again given the original form of the GAP in March. Results indicated that there were no significant differences between post test means of experimental and control groups in either study. The slowed tapes with poorer readers appeared to be especially successful in the second study.

The impact of individualized instruction on the academic achievement of 30 inner-city seventh graders from a self-contained classroom was evaluated by Corley and Lewis (107). Academic achievement gains on the *Iowa Tests of Basic Skills* from pretest to post test conditions were compared following 4 months of individualized instruction in an open classroom atmosphere with expected gains and with gains from post test to follow-up 6 months later. Among the findings: On the Word Knowledge subtest, the performance score in vocabulary improved .72 months on the average for the 4-month period, with a remainder gain of .81 months for the remainder of the period showing an overall gain score of 1.53 years versus expected gain score of 1.00. Results were also reported on Problem Solving and Computation subtest performances.

V-7 Teaching reading—high school

A longitudinal study of the effects of 2 different approaches to reading used in an Irish primary school on subsequent leisure time reading behavior was reported by Greaney and Clarke (209). All experimental pupils in a sixth standards' Dublin boys' primary school were assigned to an individualized approach to reading, while control pupils, also in a boys' school, were in a classroom using the basal approach. The experiment involved daily 40-minute reading periods for 8 months. Both groups were taught by the same teacher. Six years after the experimental procedures had been completed, questionnaires were sent to the homes of the 74 boys in the original study. A total of 66 questionnaires were returned; 4 subjects failed to return them; 4 could not be contacted. Information on the amount of time devoted to leisure time reading, magazine reading, and newspaper reading was collected. A list of books read during the previous 3 months was also requested and analyzed in terms of quality on a 5-point scale for fiction and a 4-point scale for non-fiction. A 4-point scale was also developed to classify magazines read. Results indicated that over a 3-month period, 73.3 per cent of the experimental group and 57.1 per cent of the control group had fully or partially read at least one book. The figures for magazine reading and newspaper reading were nearly identical for the 2 groups. No significant relationships were found between methods of reading instruction and quality of fiction read, quality of non-fiction read, or quality of magazines read.

The impact of teaching traditional versus transformational grammar on writing skills and other language outcome measures, including reading comprehension and attitudes, was investigated by Elley, Barham, Lamb, and Wyllie (155) in a 3-year study involving 248 high school students of average ability. The investigation was conducted in a coeducational high school on the outskirts of Auckland, New Zealand. Subjects were organized into 8 matched classes. For a period of 3 years, 3 matched groups studied 3 different English curricula. Two of the groups studied the Oregon curriculum—one with, and the other without, the transformational grammar strand. The third group took a conventional English program that emphasized the development of the skills of reading, writing, listening, and speaking with exercises in traditional grammar concepts. Three experienced English teachers taught each of the 3 treatment programs at different times. Program effects were measured by a wide range of language criteria, including essay-writing skills, sentence structure, usage, spelling, reading comprehension, vocabulary, literature, and attitudes. All groups had approximately 574 periods of English in the 3 years with even distribution of morning and afternoon classes and of time spent on literature, on composition work, and on evaluation exercises. At the end of each year of the investigation, all students wrote a series of set essays on a variety of topics, and the essays were independently evaluated on a 16-point scale according to the criteria of content, organization, style, and mechanics of writing. At the end of each year, the subjects were administered a variety of language tests including the New Zealand Council of Educational Research *PAT Reading Comprehension and Vocabulary Tests*. Author-constructed questionnaires were completed each year by the subjects to assess their attitudes to different parts of their English programs. The results of the research was based on mean comparisons on 12 language variables for all subjects in the 3 treatment programs for each of 3 years. A variety of particular findings were reported. However, a general conclusion was that teaching English grammar, whether traditional or transformational, was not found to have any measurable effect on the language growth of typical secondary school students. After 2 years, no differences were detected in writing performances or language competency; after 3 years, some differences appeared in some minor conventions of usage favoring the transformational grammar group but this was accompanied by less positive attitudes toward English studies as reflected on student questionnaires. No differences were found in the School Certificate English results of the 3 groups or in a follow-up exercise 12 months later.

The effectiveness of a program to motivate students on how to learn was investigated by Bragstad (56) through the use of learning strategies for high school geometry. The study involved 25 students in an experimental group and 25 students in a control group, a geometry teacher, and a reading consultant, all at the same high school in Madison, Wisconsin. Before the start of the program, the subjects were administered a questionnaire to assess the subjects' knowledge of study techniques. After 4 weeks of exploring various strategies for learning, the subjects were re-administered the same questionnaire as a post measure. Based on the comparison of pre- and post results via a Mann-Whitney U test, the experimentals produced significantly more ideas than did the controls. Also, according to geometry grades, the experimentals attained a better academic record than did the controls in terms of improved grades.

The teaching effectiveness of single flow diagrams versus texts on discriminated recall of sequential chains of verbal labels was explored by Holliday (259). The sample consisted of 207 high school students who were enrolled in an introductory biology course in the Calgary public schools of Canada. A block word and a picture word flow diagram and a common biology text describing the same chains concerning the nitrogen cycle were used for 2 experiments. Five instructional treatments and a test were employed for the twofold study. The treatments consisted of 1) the text, 2) the picture word diagram, 3) the picture word diagram adjacent to the text, 4) the block word diagram, and 5) the block word diagram adjacent to the text. The same 37 verbal labels were included in both diagrams and the text and the same instructive questions were used in each treatment group. The subjects were randomly assigned to the 5 groups and were instructed to learn the material and answer the instructive questions in writing. Results from comparison of mean scores on multiple choice verbal measures supported the hypothesis that in teaching sequential chains of verbal labels, a single flow diagram was more effective than a textual description alone; and it was also more effective than a combination of diagram and text. The textual description alone was also shown to be effective in terms of pretest and post test comparisons of the textual treatment scores.

As a curriculum project conducted in England, Calthrop (73) sought to ascertain actual classroom practices concerning the use of prose books in the teaching of literature to students between the ages of 11 and 16. Data were collected from questionnaire responses of over 600 secondary school teachers, interviews and observations of some of them, and interviews and questionnaire responses from some of their students. The questionnaire focused chiefly on successful practices carried out with particular literature books for more than one class of a given type and age level and on the approach and methods used. The product of this effort was presented in a monograph of 7 chapters without focus on data of a statistical or factual nature. Discussed extensively was the use of the class reader, criteria for teachers' choice of books, methods and practices in teaching selected works, and consideration for the less able. Also included were a selected list of books according to children's reactions, the most popular books reported on, and a complete list of all books reported on.

V-8 Teaching reading—college and adult

Comprehension and rate gains of 109 college students was measured by Carpenter and Jones (78) to assess the impact of reading laboratory classes on reading achievement. Using a sequential, individualized approach, the reading course emphasized the skill areas of comprehension, vocabulary, and rate over a 6- to 8-week duration after which application of acquired skills was encouraged to textbooks, paperbacks, and journals. The instructional materials of the program included paperbacks and handouts that were cross-referenced by subskills on the students' assignment worksheets. Achievement gains of students within the reading classes for the spring and fall semesters were determined by the difference between initial and end-of-year percentile scores on the *Nelson Denny Reading Test* subtests of Comprehension and Rate. It was found that significant gains for comprehension and rate were made for both semester classes studied. The mean percentile rank for Comprehension increased from 42 to 61, and the mean rate increased from 255 words per minute to 515.

Shrauger (501) evaluated a personalized reading instructional program in a conventional classroom at a community college. The aim of the program was to teach students to learn how to learn, to direct their own learning, and to improve their reading and vocabulary skills. A variety of data were collected at the start of the program including Vocabulary and Reading scores on the *McGraw-Hill Basic Skills Test*. Tapes, program texts, practice exercises, mechanical aids, and boxed programs were employed as learning materials to improve vocabulary and reading skills. Activity progress and records were maintained by each student with the use of a manila folder. After 1 semester, results from analysis of pretest and post test scores of students in 4 classes showed positive gains in the reading areas of vocabulary and comprehension. Student evaluation of the program was judged as favorable.

Henderson (249) compared an individualized reading instructional program involving 34 students with a prescriptive program involving 28 students. The purpose was to examine the reading achievement and interest gains of the students who were enrolled voluntarily in reading improvement classes at 3 Oklahoma community and junior colleges. Students who were instructed by the personalized method were given individual conferences at the start of the program with the aim of goal setting and guidance based on test findings. Weekly individual conferences and class discussions were held to consider self-selected materials, progress towards weekly goals, and application of reading and study skills. Approximately 15 minutes per week were allotted for class discussion. Students instructed by the prescriptive method were provided with a folder containing guides to reading laboratory materials and sheets for keeping a record of scores earned. The core materials were common to both instructional programs. Program effectiveness was measured by pretest and post test scores on standardized and author-constructed measures, including the *Nelson-Denny Reading Test*. Significance of differences of mean score comparisons was calculated by four 2 × 2 analyses of variance, using an unweighted means solution. After 1 semester of treatment, both programs produced gain scores with greater increases in the reading areas of vocabulary and rate in favor of the students taught by the personalized method. No differences in gain scores were found in reading comprehension between the 2 treatment groups. Gain scores on reading interest measures by the personalized subjects and by the prescriptive subjects were not significantly different.

The efficacy of 2 behavioral self-control procedures on study behaviors was studied by Richards (461). A total of 90 undergraduate student volunteers were used as experimentals and 18 non-volunteer students, as controls. Both groups of students were enrolled in the same introductory university psychology course. A between-subject pyramid design was used, with the pyramid entailing combinations of self-control procedures as treatment additions to the study skill advice. The 2 control and 4 treatment groups were employed to include 1) no-contact control, 2) no-treatment control, 3) study skills advice, 4) study skills advice plus stimulus control, 5) study skills advice plus self-monitoring, and 6) study skills advice plus stimulus control plus self-monitoring. Treatments were delivered primarily via typed handouts. In terms of course exam scores, it was predicted that self-monitoring would be an effective treatment additional to study skills advice and that stimulus control would not. It was also predicted that study skills advice would be superior to the control groups and that these controls would be equivalent. The results supported these predictions.

The application of time-compressed and time-expanded speech tape recordings of passages was explored by Neville and Pugh (410) in an experiment to improve the ability of 7 foreign students to read fluently in English. The speeding and expanding of the passages was carried out on the Eltro Tempophon speech comprehension machine, which discarded or added intervals of tape randomly between and within words. Three different listening conditions were tested under rates of speeded, normal, and slowed speech while the subjects under each condition followed the text. Pretest and post test scores were compared on performances of different forms of the *Neale Test Passage Five*. Analysis of the findings disclosed great individual variations in test performances.

Readability estimates, cloze tests, teacher evaluations of students, and questionnaires from 154 subjects were used by Spring (521) to investigate how much students learn from their textbooks at a community college. Six textbooks were analyzed for readability levels according to the Fry formula. Cloze tests were designed for each textbook and administered to students as a means of assessing their reading levels. Questionnaires were also administered to ascertain the students' subjective evaluation of the textbook. Finally, teachers rated each student in terms of course final grade, whether the student seemed to have any trouble reading the text, and related evaluation items. Data were compared by reading levels of students as related to their perception of sources of information, text difficulty, course grades, and teacher's estimate of student achievement as well as reading difficulties. It was found that 23 per cent of the subjects scored on the frustration level for their texts as determined by the cloze tests. In general, results of comparisons disclosed that cloze test performances were not predictors of course grades. Regardless of reading ability, most students believed that their grades were in good part dependent on text information and that most of that information could be obtained by other sources. Many also reported that teachers were considered the main source of information.

Etaugh and Michals (160) proposed to examine the effects on reading comprehension of music selected by the subject rather than by the experimenter. Two passages each followed by 5 questions based on the passage were administered to subjects. Passages were to be read for a maximum of 10 minutes and questions were answered without referring back to the text. One passage was read under a no-music condition and the other was read with a record of preferred music playing at moderate volume. Order of presentation was reversed, and each passage appeared in each condition half the time. Subjects were also asked if they studied to music frequently, occasionally, or never. Females performed more poorly in the music condition than in the no-music condition. No significant differences were noted for males. Among females, 10 of the 16 subjects reported never listening to music while studying.

V-9 Teaching—materials

The long vowel sound encoded by the letter *u* was investigated by Rinsky (465) in word samples from basal and phonic workbooks. It was discovered that instructional materials frequently confused the grapheme *u* which has the phonemic value of /o͞o/ as in *rude* with the long *u* as in *fuse*. Other examples given as erroneously treated in selected phonic books were *tube, flute, prune, rule, lure, June, crude, tune*; all these are considered pronounced with the /o͞o/ sound and not long *u*. Linguistic analysis disclosed that when the letter *u* was a syllable by itself, it decoded as the traditional long *u* sound as in *unite* and *simulate*. Further, when the grapheme *u* followed the sounds of the phonemes /b, f, g, h, k, m, p/ the *u* is decoded as the long *u*. However, when the grapheme *u* followed the phonemes /d, l, n, r, t/ and /j/ as in *jar*, the *u* is decoded as the /o͞o/ sound.

A checklist for evaluating elementary school dictionaries was developed by Laughlin (330) in a comparison study of 7 widely used school dictionaries. Criteria for evaluation included clarity of definitions, pronunciation key, illustrative citations, etymology, encyclopedic material, illustrations, binding, and introductory matter. Two categories of dictionaries were examined to include 3 beginning dictionaries and 4 junior dictionaries.

The proportion of words in written materials for children and adults were calculated by Johns (273) in terms of the words on the Dolch List and on the Word List for the 1970's. The American Heritage Intermediate Corpus and the Kučera-Francis Corpus were used for comparison purposes. It was found that the words in the 1970 list accounted for a greater proportion of words than the Dolch words in materials intended for both children and adults. Described in the study was the criteria for the Development of the Word List for the 1970's.

Hanggi (230) compared the similarities and differences of the 220 words on the Dolch List and the 220 most frequent words from the

Kucera-Francis Word List. It was found that 138 words appeared on both lists and 82 words appeared on one list but not on the other. Thus, 63 per cent of the words were common to both lists and were judged as legitimate sight words.

Words on 4 recently published lists were compared by Johns (274) to the 220 basic sight words on the Dolch List to determine the proportion and per cent of Dolch words not found among the words on each of the 4 lists. They included the American Heritage Intermediate List, Durr List, Kučera-Francis List, and Murphy List. The study had several findings. Approximately 85 per cent of the Dolch words appeared among the 500 most frequent words of the American Heritage Intermediate List. A total of 79 Dolch words did not appear on the Durr List. Approximately 75 per cent of the Dolch Words appeared on the Kučera-Francis corpus, and about 90 per cent of the Dolch words were on the Murphy List. The Dolch words not found among the 4 word lists are listed in the report.

Four different lists of high frequency words were used by Johns (272) to modify and to update the Dolch Basic Sight Vocabulary List. Examined for comparison purposes were the American Heritage Intermediate List of frequently occurring words in children and adult reading materials, the Durr List of high frequency words in trade books for children, the Kučera-Francis List of common words used in a variety of subject matter and prose materials, and the Murphy List of words drawn from oral vocabularies of kindergarteners and first graders. The words on these 4 lists were compared to find those words most common to at least 3 of the word lists. It was found that 189 Dolch words met the criterion of commonality. Thus the Dolch List was revised with the deletion of 31 words judged as not basic (as determined by comparative data) and with the addition of 37 new words judged as basic. The updated list totaled 226 words.

The *Syntactic Complexity Formula* was used by Kaiser, Neils, and Floriana (280) to estimate the syntactic complexity of 4 school readers commonly used for initial reading instruction. For purposes of comparison, 2 were traditional basal readers and 2 were linguistic in emphasis. Passages selected for analysis were of equal average sentence length as determined by the *Fry Readability Formula*. Measurement of syntactical structures was in terms of a weighted system of values. Simple or kernel sentences were assigned complexity counts of 0 and additional structures or constructions, such as adjectives, negatives, infinitives, and dependent clauses were given counts of 1, 2, or 3. The syntactic complexity of a given sentence was the sum of the counts given the structures of which it was composed. A sample of 150 sentences was analyzed in all. Results obtained indicated in general that there was variability between passages even though sentence length was held constant. The average complexity scores ranged from a low of 0.32 to a high of 2.30. A score of 4.00 was judged as unsuitable for primary grade materials. Two passages were found to have sentences that exceeded that limit, going as high as 5.00. Also, the findings disclosed that the selected readers did not follow a systematic progression from less to more complex syntactical structure in passage construction.

Klare (298) compared the judgments of 56 professional agricultural writers when asked to rank 5 passages from the McCall-Crabbs *Standard Test Lessons in Reading* from most to least readable. Passages were selected with a difficulty range from 4.2 to 12.0, were spaced approximately 2 grades apart, and were presented to the subjects in random order. Results showed wide variability in judgment. While only 5 of the judges ranked the passages in the tested order of readability, the consensus judgments of the entire group were correct. The author states that consensus of judgment of readability increases with larger number of judges, contributing to the inefficiency of this method when compared with application of a readability formula.

Readability estimates on 53 Newbery award winning children's books were determined by Guidry and Knight (220). The authors used the Dale-Chall, Flesch, Fry, and Lorge formulas. In addition to the readability levels predicted by all 4 formulas for each Newbery book, a mean readability was determined for each book. The difference was then measured between the estimated readability for each method and the mean readability. Thus, a variance value was ascertained for the respective methods. The findings disclosed that the Dale-Chall method yielded higher ratings than the average estimates in 43 instances. The Fry formula yielded lower ratings than the average estimates on 39 books. It was judged that the Lorge and Flesch methods produced reasonably valid estimates within the given comparison set.

At the seventh grade level, reading ability of students and difficulty of materials were controlled by Rodriguez T. and Hansen (469) in a study exploring the extent that estimates from reading formulas can be improved. From a literacy assessment project undertaken in a Midwestern city's public school system, the data in the study were derived from 10 item cloze tests developed on 60- to 70-word passages randomly selected from a predefined variety of materials that seventh graders were supposed to be able to read. For each passage, the mean cloze score was secured, and a set of linguistic variables was computed according to guidelines developed elsewhere. These variables were used as independent variables to predict mean cloze scores. For purposes of analysis, 2 approaches were treated. In the first, 45 passages from textbook materials were used and 4 predicted means were computed for each passage. In the second, leisure-time and newspaper materials were used, and 5 predicted cloze means were obtained and 1 was derived from a formula developed in the first analysis. Coefficient correlations were calculated between predicted and obtained mean cloze scores, and slip-wire regression equation was computed with input of language variables and mean cloze scores for predictive purposes. The results showed a reduction in the validity of the earlier formulas believed due to the short length of the passages used in the study as well as to the linguistic variables used and/or to the curvilinear relationship among them. When the range of difficulty of materials and ability levels of students were restricted, the best predictors of the cloze criterion were different from those identified in earlier studies where there were no restrictions on the levels of materials and student abilities. For textbook materials, the multiple correlation coefficient obtained from variables reaching .05 significance level was .648 or 42 per cent of the total variance as accounted for mainly by the variables of structural words per noun, letters per sentence, and referential repetition anaphora per word. The formula developed in the textbook materials gave better cross-validation results than did Bormuth's formulas.

Readability analysis of SRA Power Builders was conducted by Rosen (473) with the use of the Dale-Chall Readability Formula. The power builder of the SRA Reading Laboratory IIIB was selected for readability assessment. One passage for approximately every 500 words was selected for study. An average readability score for each power builder was ascertained, and an average readability score was determined for each color level. The findings disclosed that the readability scores for the power builders ranged from grade 4.0 to grade 13.9; and the average readability score for each level ranged from grade 5.8 to grade 12.2. Based on a comparison of publisher-determined grade level, estimates of the same materials with Dale-Chall readability scores, the publisher estimates were 0.2 to 1.4 years lower than the computed scores.

Reading ease and interest levels were estimated by Hofmann and Vyhonsky (257) for 36 introductory educational psychology texts using the Flesch readability procedures. The texts were published in 1970-1974. Random samples of 20 pages were selected from each text. From these 20 pages, 5 100-word samples were arbitrarily chosen. A reading ease score and a human interest score were obtained from each

100-word sample. A rank-order correlation was calculated between the reading ease scores and the human interest scores to determine the degree of relationship of the 2 variables, and the rho equaled .47, which was significant. The results of this study were compared with the results of an earlier study concerning estimates of human interest and reading ease scores of introductory psychology texts. Based on comparison data, educational psychology texts were judged as having a greater probability of being classified as dull and very difficult than introductory psychology texts.

Gillard (197) investigated the ability of first and fourth year high school students in Britain to deal with science textbooks. A cloze test (tenth word deletions) was administered to first year students covering physics, chemistry, and biology texts. On the basis of Bormuth's criterion, at least 40 per cent or less on cloze scores indicates that the book is too difficult; all science texts were judged to be too hard. Physics texts were easiest, while biology texts were the hardest. First year subjects were also asked to list all unknown words encountered in the science texts. Results indicated that vocabulary, in terms of its importance to reading achievement, decreases as comprehension skills increase. Fourth year students were also administered cloze tests on science as well as English texts. Performance varied on same-level English and Science texts, indicating that different skills were required in reading content texts. Applying the 40 per cent criterion on cloze tasks, less than 1/3 of the girls were able to deal with the 3 science texts; boys had similar problems with the biology and chemistry texts. In the next phase of the study, questionnaires were sent to several schools in an effort to learn how the schools went about choosing textbooks. The 3 most common responses were 1) "largest coverage of syllabus," 2) "simplicity of language," and 3) "cost per book." The author includes additional discussion regarding specific reading skills required in dealing with science content.

V-10 Teaching—grouping

Teaching of word identification methods and readability of materials were examined by Alpert (8) to determine their use in a study of 3 high and 3 low reading groups drawn from middleclass parochial schools in New York City. Differences in methods across groups were considered by tape recordings of 15 classes for 2 reading groups in 2 sessions. The recorded teaching practices were classified as either whole-word method, whole-word plus phonics method, or phonics method. Readability scores of reading materials used by the subjects were determined by the Fry Readability Formula. Results from the chi-square analysis indicated that the high reading groups were taught more often by whole word methods and the low reading groups were taught more often by whole word plus phonics than the other approaches. In general, the high reading groups had basal readers as instructional materials more often than did the low group. A comparison of readability levels of instructional materials and reading achievement scores of the 2 groups on the *Gates MacGinitie Reading Test* indicated that for the high group, the mean reading grade scores of the group was above the mean readability level of their basal readers; and for the low group, the mean reading grade score of the subjects was below the mean readability level of their instructional materials.

Warner (572) investigated the effectiveness of an experimental program to individualize instruction. The program included aspects of self-pacing, self-selection, self-direction, self-evaluation, self-discipline, and skill implementation. Actual gain with predicted gain was compared on a variety of standardized academic achievement tests including the *Gates MacGinitie Reading Test* (GMRT). Subjects were third and fourth graders in a Title I school located close to a federal housing project. Data were collected from pretesting and post testing conditions, and the mean scores were compared for significant increases in gain scores on the Vocabulary and Comprehension subtests of the GMRT as well as an average gain of 16.6 months on the *Spache Oral Reading Test* after 8 months of actual instruction.

Butterworth and Michael (70) looked at the effect of evaluative feedback systems on 600 sixth graders' performance in reading, their attitudes toward school, and their acceptance of academic responsiblity. The total group was divided into 2 groups, each equivalent on the Verbal Scale of the *Lorge-Thorndike Intelligence Test*. Treatments consisted of a traditional (A-F) grade reporting procedure and an individualized procedure involving evaluative feedback in the form of narrative statements. Additional information was obtained with the *Comprehensive Test of Basic Skills* (Reading subtest), the *Intellectual Achievement Responsibility* scale, and a measure of attitude toward school. Data were analyzed with 2 × 2 × 2 univariate analyses of variance. Results revealed significant main effects for each dependent variable favoring the individualized reporting system over the traditional one, high ability subjects over low ability subjects, and girls over boys. Subjects of low achievement level appeared to have profited by the individualized reporting system more than subjects of high achievement level.

V-11 Corrective and remedial instruction

A follow-up study was reported by Edgington (150) on 25 subjects who were enrolled in a special learning disability program during the 1964-1967 school years. The average participation in the program was 9 months with original grade placement of the subjects ranging from second to sixth grade. Instructional emphasis was in the areas of reading, arithmetic, and spelling; and student attendance time ranged from 25 to 90 minutes daily in the program. Among the findings on interview data collected from school personnel, parents, or students was that early services appeared to help children with learning disabilities stay in school longer.

Sinatra (505) described the use of a language experience approach in the teaching of specific reading vocabulary related to outdoor activities of a summer camp program for Title I children. Under study were 1,017 black children with severe reading deficits who had completed grades 1 through 8. The subjects attended for either 2 or 3 weeks at summer camp and were taught a total of 175 outdoor words through the experience story and demonstration approaches. Reading was taught 10 hours a week in 1-hour lessons. Gains in vocabulary were measured by an author-constructed word knowledge test of 50 randomly selected words under pretest and post test conditions. Comparison of mean scores indicated significant differences in post test gains for all campers at all grade levels except for 18 children who had completed the eighth grade.

Three different programs to treat hyperactive children who attended a special school in New York with 17 staff members were described by Krippner (313). In the 1972-1973 school year, the subjects were 17 children. The subjects doubled in 1973-1974, and reached 65 for the 1974-1975 school year. They ranged in age between 6 to 13 during the final year. The 3 treatments consisted of sensory-motor training, dietary alterations, and individualized instruction in an open classroom. Based on a variety of standardized measures—including the *Roswell-Chall Diagnostic Reading Test* and the *Wide Range Achievement Test*—the treatment groups showed growth in general from year-to-year when mean pretest and post test scores were compared. However, no controls were used in the study.

The federally funded Emergency School Assistance Program or ESAP was the subject of a case study by Crain and York (112) in an evaluation of schools randomly designated for ESAP support. Pairs of schools were selected, and ESAP funds were randomly awarded to one in each pair of 50 high schools and 100 elementary schools selected for the evaluation program. Thus, one school in each pair was funded and the other was not funded, serving as a control. The funds were intended to improve race relations, with the expectation that improvement would raise academic achievement. At the end of the school year, data were collected from a variety of sources which included questionnaires, achievement tests, and interviews of school principals and community leaders. A multiple regression analysis was used to assess program effects on achievement. The results disclosed that no significant differences were found at the elementary level, but the effects for high school students was statistically significant. Black male students were found to have higher achievement test scores in the ESAP supported schools than in the control schools. Although no overall improvement in race relations in ESAP schools were noted, urban white students were found to be more tolerant in schools where human relations programs were established. Many of these programs were funded by ESAP.

The reading achievement of 250 migrant children was examined by Symula (534) in a report of a migrant tutorial reading program funded by the Bureau of Migrant Education. In the program, tutors were trained to work with migrant children in the schools. Each child, depending on age, was tutored from a half hour to an hour a day, 5 days a week. Each tutor worked with no more than 4 children an hour. A commercial reading program was used as the basic tutorial system. Pretesting and post testing was accomplished with the use of the *Spache Diagnostic Reading Scale* to measure achievement of the subjects. The average gain in reading was 1.4 years for the school year of tutoring.

Reading ability levels of 24 elementary clinic cases were compared by Arnold and Sherry (15) to the readability levels of assigned reading textbooks to determine the extent differences exist between the 2 levels. More specifically, the means of student instructional reading levels were compared to the grade level of assigned textbooks in the areas of reading, social studies, and English. The differences between reading levels and readability levels for each possible pair were computed by Student's Test for differences between means. In most of the comparisons, significant differences were found indicating that assigned materials were rated beyond the reading ability levels of the students and were judged as too difficult.

Aaron, Call, and Muench (1) evaluated a computer managed, individually prescribed learning program at a youth development center for behaviorally disordered, delinquent adolescents. The 126 subjects were 14- to 18-year-old boys who were randomly assigned to one of 2 treatment conditions for the study. The experimental condition consisted of an individualized reading program involving worksheets which listed objectives, materials to be used, and directions for meeting the objectives. A computer was used to score the mastery tests and to keep track of pupil programs. The control condition consisted of a traditional basal reader program with small group instruction. Pretest data were secured at the start of the program from results on the *California Achievement Test* (CAT) in Reading and Mathematics for both experimentals and controls. Upon leaving the program, the subjects were administered the CAT as the post test measure. A comparison of mean gain scores between the 2 groups favored the experimentals even though the controls were taught more days in the program. No significant differences were found between the control and experimental groups in mean IQ or mean CA. When attitudes were inventoried, the experimental subjects expressed more positive feelings about their school work than did the controls.

Johnson, Korn, and Dunn (275) compared a visual slide-tape method of presenting occupational information concerning the hydroelectric plant operator with printed and aural presentation modes. The subjects were 58 reluctant learners who ranged in age from 15 to 17 and came from 8 different Wisconsin high schools. Subjects were randomly assigned to one of 4 treatment conditions. One group served as controls and received no treatment information. A second group received printed information; a third group listened to a tape cassette presentation; and the fourth group viewed a slide-tape presentation. All 4 groups were administered an information test to ascertain from the 3 experimental groups the amount of occupational information retained from the presentations and from the controls, the establishment of baseline information. The data were analyzed by one-way analysis of variance and the Duncan multiple-range test. Significant differences were found in the comparison of information scores among the 4 groups with results favoring the slide-tape presentation group. No difference in mean scores were found between the subjects in the reading and listening treatment groups.

The outcomes of a contingency management day program for adolescents excluded from public school were reported by Stein, Ball, Conn, Haran, and Strizver (524). A total of 44 boys acted as subjects over a 2-year period. A contingency based contracting program was established between subjects and program staff where reward reinforcement was contingent on specific student behavior. Contingency contracting also involved family therapy conditions to gain specific reinforcers for the student. Of particular importance was the aim of the program to improve student behavior so that subjects could reenter public schools. The subjects participated in an educational program that stressed either job-related skills or survival functional skills. Academic and social behaviors were managed through a point system to induce learning. No punishment was used. Points were exchanged for reinforcers to buy free time, special priviledges, or recreation. Based on comparison of pretest and post test scores on the *Peabody Individual Achievement Test* (PIAT), the subjects made gains for both years, but only second year data showed significant differences between pretest and post test means. The growth in the Reading Comprehension subtest of the PIAT was 1.62 years for the 9-month period of the second year. An exceedingly low drop-out rate in the program was reported, with 95 per cent of the subjects either continuing in the program beyond the first year or reentering public schools.

A highly structured non-individualized tutoring program was described by Graves and Patberg (208) in a project with 10 seventh and eighth graders who were reading between second and fifth grade level. Tutors were college students. The project employed 3 teaching programs entitled the *Graves Sequence* for beginning reading skill development, the *Action* books for reinforcement of skills taught, and *Double Action* materials for extended practice. Within a program, only pacing was individualized. The subjects participated in the project during the second class period of the school day and they were tutored 3 days a week in 45-minute sessions for less than a year. Results on the *Spache Diagnostic Reading Scales*, used as pre- and post measures, indicated a mean gain of 1.4 grade levels with only 1 subject making less than a 1-year gain.

Casey (86) assessed a composite reading and writing program in a community college Title III program involving 200 students requiring remedial assistance. The remedial English and remedial reading classes were correlated during 1 semester to include 7 hours' weekly core program of 3 English lectures, 2 reading lectures, 1 reading laboratory, and 1 tutoring session. Program effectiveness was measured in terms of pretest and post test comparisons of scores on the Advance Paragraph Meaning of the *Stanford Achievement Test*. After 1 semester, analysis of pre- and post scores indicated average growth of 1.06 years. Expected growth was .45 years, based on a 4 and one-half month semester.

V-12 Teaching—testing

Different modes of testing phonic skills were explored by Ramsey (454), using 138 second graders as subjects. Three types of test presentations were employed to compare their results with the subjects' ability to apply phonics knowledge to decode unfamiliar words in meaningful context. One test required the subjects to choose a written word from among 4 that contained the same phonemic element as the one pronounced by the tester. The second type of test required the subjects to pronounce isolated consonant elements that were presented in print. The third mode required the subjects to write the missing elements to complete the test word as pronounced by the examiner. The consonant elements to be tested were the same for each of the 3 test modes. The 3 phonic tests and the context measure were administered in random order to each subject so that no more than 3 days elapsed between the time a specific child was given the first and last tests. Although 90 per cent of the words on the context test were visually unfamiliar to them, subjects were able to decode about 1/2 of words in context. The differences in mean scores between performances on the context measure and the performances on the 3 phonic tests were statistically significant at the .01 level. Forty per cent of the errors on the context measure were on words for which the subjects knew separately the initial sound and the attached stem, indicating a problem in blending. Little agreement was found among responses of individual subjects to individual items in their performance on the different phonic tests.

Prediction equations and computer simulation were used by Rankin and Bryant (455) in an effort to identify the sensory modality through which 108 low-achieving, inner-city third graders learned to read most efficiently. One class from each of 3 elementary schools was randomly assigned to one of 3 different treatment conditions or modes of instruction. One group was taught word identification through visual clues, the second group through auditory clues, and the third group through kinesthetic clues. The training period was 30 minutes per day for 12 weeks of reading instruction in the 3 modality groups. At the start, a variety of auditory, visual, and tactile measures—as well as psychological tests—were administered to all the subjects as predictor variables. Criterion variables included the *Gates-MacGinitie Reading Tests* and the *Wide Range Achievement Test* for measures of comprehension, vocabulary, and word recognition in reading. Prediction equations were formulated as a result of step-wise regression analysis. These equations were composed of the pretest variables that emerged from the regression analysis as contributing significantly to the prediction of the criterion variable. Through a weighting system, the result of the statistical analysis was a simulated grade score for each pupil indicating the predicted growth from training if a pupil were given instruction in the method for which the calculation was made. Correlation data disclosed that, among many findings, scores on 16 of the 27 pretest variables were significantly related to the scores on the criterion vocabulary test, 15 pretest scores were related to scores on the comprehension criterion, and 13 scores correlated significantly with the word recognition criterion scores. Also, the multiple correlation coefficients derived from the analysis of scores on selected pretest variables and the criterion variables were high and significant. Other findings were presented to support the hypothesis that predictive values can be secured through computer simulation technique in the selection of pupils for modality training.

Colarusso and Gill (98) examined 14 widely used tests of visual perception and related functions to evaluate their usefulness and appropriateness, using criteria of test and scorer reliabilities, skill area tested, age range, size of norm groups and administration and economy variables. Several of the instruments did not report the standard error of measurement for their test scores. Only 2 visual discrimination tests were identified as being free of motor performance. A number of instruments actually assessed visual-motor integration. The authors felt that such devices may well reflect motor deficiencies rather than perceptual inadequacies.

A comparison of performances on the *Wide Range Achievement Test* (WRAT) and the *Peabody Individual Achievement Test* (PIAT) was made by Baum (39) using a total of 100 subjects at 4 age levels from self-contained classes for learning disabled students. The elementary school classes were located in primarily middle and upper-middle suburban areas adjacent to a large Southern city. Both the WRAT and PIAT were individually administered to each subject in a single session with the order for presenting the 2 tests reversed for every other subject. Comparisons of means and standard deviations between both measures indicate in general that the WRAT scores corresponded more closely with the PIAT scores at the 7 to 8 year level than did the scores at the 11 year level. Pearson product moment correlation coefficients between corresponding reading subtests of the WRAT and the PIAT ranged between .56 to .90 among the age-level comparisons. Intecorrelations of the subtests of the 2 instruments for the total sample were calculated. The WRAT Reading scores correlated .92 and .77 respectively with scores on the PIAT Reading Recognition and with PIAT Comprehension subtests.

A comparison of scores was made by Spooncer (519) between performances on a cloze test and an abbreviated version of the *Daniels and Diack Test of Reading Experience.* Subjects were 68 English students from 2 streamed fourth-year junior classes—X and Y. For cloze material, passages were taken from *Looking at History*, Books 1, 2, and 4. Results indicated that scores on the cloze test showed a better spread than the scores on the standardized test. The overall performance of 35 X-streamed subjects exceeded the performance of the 33 Y-streamed subjects. Another sample of unstreamed fourth year students was tested on the same cloze test, the *Vernon-Warden Test B* as a sentence completion measure, and the *Moray House Test* as a measure of verbal reasoning. The distribution of average scores on all 3 measures increased evenly suggesting a relationship among the performances on sentence completion, verbal reasoning, and cloze tests.

Carstens and McKeag (80) explored different procedures for interpreting cloze scores and assigning rankings to students based on cloze performance. The authors administered a pre-cloze and post cloze test to 8 university subjects and computed gain scores. Subjects were then ranked in 5 different ways: post cloze score only, sum of pre- and post cloze scores, reading gain only, sum of pre-cloze plus post cloze plus gain, and sum of post cloze plus gain. Students were ranked by each of the 5 methods, demonstrating variance in student rankings dependent upon method of scoring.

Seven correlates of reading comprehension were examined by Henning (250) for predictive validity, difficulty, and discriminability at 2 levels of passage difficulty. Used as a sample were 27 Iranian college women who were in their second semester of freshman English. Sixteen comprehension pieces were randomly selected for testing, 8 each from 2 standardized tests. The 8 elementary pieces each contained 3 subtests: cloze recognition, synonym-antonym selection, and a multiple choice sentence selection. The 8 intermediate pieces each employed 3 subtests: cloze-recognition, synonym-antonym selection, and question-sentence response. In addition, a response grammaticality subtest was included in the intermediate battery. The 16 tests were administered in pairs, an elementary with an intermediate, over a 45-minute class period. Predictive validity of the 7 subtest predictors in relation to the criterion of total test score was estimated by Pearson product moment correlation coefficients. Multiple regression correlation coefficients were also computed on the 7 predictor variables. Multiple choice sentence selection ($r = .736$) at the elementary level and synonym-antonym selection ($r = .768$) at the intermediate level were found to be the best predictors of reading comprehension.

Pyrczak (448) compared 2 indices of passage dependency—one based on number of correct answers of passageless questions expected by chance and the number actually given, the other based on the number of correct answers given by 2 groups of readers (one group provided the passage and the other not). He demonstrated conditions under which the 2 indices gave dissimilar results and under which one of the indices gave similar results for 2 test items when the other index gave dissimilar results for the same items.

The ability of students to identify correct answers before reading the test passages from a standardized reading comprehension measure was studied by Keetz (286). The first 30 items of the *Cooperative English Test C2: Reading Comprehension* (Higher Level), Form R (1950) were administered to 98 randomly selected first-year English students at Pennsylvania State University, Ogontz Campus. The findings supported the hypothesis that the sample population would score better-than-chance on the 30-item passageless test. Results showed a mean of 7.27 correct responses as compared to the expected mean of 6.0 correct responses on the basis of chance. The difference was statistically significant. A comparison between the results of this study and of a previous study in 1964 revealed higher correlations between the passageless test scores and other measures in the present study. The other measures were test score subsequent to reading the passages, verbal score of the *Scholastic Aptitude Test*, high school quintile, and grade point average.

Hammill, Parker, and Newcomer (228) examined the relationship among subtests of the *Illinois Test of Psycholinguistic Abilities* and subtests of the *California Achievement Test* with subjects similar to the standardization sample used for the ITPA. Correlation coefficients were computed between all subtests, then re-computed after grouping subjects into low, average, and high groups based on their CAT scores. Coefficients of correlation are also reported with intelligence partialled out. Of the ITPA subtests, only Grammatic Closure, Auditory Reception, Auditory Association, Manual Expression, and Sound Blending demonstrated any predictive or diagnostic validity. Grammatical Closure overall correlated most highly with language related subtests of the CAT, including reading.

A random sample of 100 children from 12 primary schools in Britain were the subjects of Ferguson's (170) research investigating the relationship between picture reading and later reading performance. The Symbols test was administered during the first term of school. Results on the Symbols test were correlated with results on 13 other tests also given in the first term. The coefficient between the Symbols test and a structure-of-language test was found to be .46, the highest of any of the tests. There was also a coefficient of .44 with an information test and .40

with the *English Picture Vocabulary Test I*; other coefficients fell below .40. During the first term of the second year in infant school, the Burt Rearranged Graded Word Reading List was administered. The Symbols test showed a coefficient of .50 with the Burt as did having the child write his name.

Estes and Johnstone (158) attempted to validate the *Scale to Measure Attitudes Toward Reading*. Attitudes were assessed by 4 methods: 1) score on the Attitude Scale, 2) number of extracurricular activities listed by students, 3) nominations by peers on a "Who Are They?" type questionnaire, and 4) self-ratings of attitudes on a 1-5 scale. In addition, other traits assessed were attitude toward English, mathematics, science, social studies, verbal and quantitative abilities, and reading achievement. Reading achievement was determined by the *Sequential Tests of Educational Progress*, Series I. Intercorrelation coefficients were determined among all traits and methods employed. The coefficient between the Attitude Scale and self-rating was .67; between the Attitude Scale and peer rating, .35; and between the Attitude Scale and extra curricular activities, .28.

VI *Reading of atypical learners*

McLaughlin and Andrews (377) explored the extent to which 36 urban deaf adults read and the nature of the material they select. Members of the Christ Methodist Church of the Deaf, a major social center for the deaf community in Baltimore, provided the representative sample for the investigation. Subjects were divided somewhat evenly into male-female and black-white groups. Ages ranged from 19 to 69, with 12 subjects in each of the following groups: 19-23; 24-49; and over 50. As a whole, the group was comprised of unskilled laborers and housewives. Personal interviews were conducted in sign language; in these, questions were asked regarding which newspapers, magazines, and books were read by the deaf persons. Most of the subjects were readers of and subscribers to local newspapers. Thirty-two read at least 1 newspaper daily, and 10 read 2 local papers each day. Men preferred sports, comics, and the front page—in that order. The women favored the front page, then the local news, and last the style and comic sections. Average time spent reading the newspaper was 17 minutes each day. At the top of the list of most read magazines was *T.V. Guide*, read by 24 of the 31 subjects who reported they regularly buy and read magazines. *Life* and *Look* were second in popularity. The men frequently read *Pro Football* (N=7) or *Sports Illustrated*, and women reported that they read *Ladies' Home Journal*, *Good Housekeeping*, or *Better Homes and Gardens* (N=21).

The younger group indicated preference for reading about movie and TV stars. Black readers frequently read *Ebony*. Subjects read books less frequently than magazines or newspapers. Approximately 11 subjects reported that they read books, with the *Bible* most often read (N=6). When presented wth a current best seller list, few of the subjects had read any of the books. In the 19 to 23 age group, 1 book was reported read; none were read by the group of 24 to 49 year olds; 2 subjects in the 50 to 69 age range said they had read from the list. The authors reported age and educational variants: Out of approximately 34 readers of newspapers, magazines, or books, the majority had been trained in schools where manual rather than oral communication was encouraged; and subjects over 50 were more likely to be book and magazine readers.

Palmer (429) studied the efficacy of i.t.a. as a medium for teaching reading to deaf children. Three groups of beginning readers were formed: i.t.a., T.O., and control; the groups were followed for 3 years. The Performance Scale of the *WISC*, a pure-tone audiometric test of hearing, and Myklebust's *Picture Story Language Test* were given once to all subjects. In addition, the following tests were administered annually: Orwid's *Oral Language Test* (Toy Vocabulary); Daniels and Diack's *Visual Discrimination and Orientation Test*; a numbers test designed by the researcher; the *Gates-MacGinitie Reading Test*, Primary A; the Southgate *Group Reading Test*, Test 2 (given to children scoring high on the Gates-MacGinitie); and Schonell's *Mechanical Arithmetic Test* (given to children who scored high on the numbers test). After the first year, the *Peabody Picture Vocabulary Test* was given each year to all children. Other data collected on children included use and understanding of speech, changes of school, social class, number in family, laterality, attendance information, and various information about the teacher. At the end of the experiment, the T.O. group performed significantly better in reading than the other 2 groups.

Adaptation of the *Durrell-Listening Reading Series* (Primary level) for publication in braille and large type for use with visually handicapped primary level children was described by Morris (396). Prior to adaptation, the test's usefulness was validated through a field evaluation in which 141 legally blind first, second, and third level readers (65 braille, 76 large type) selected from 6 residential schools for the blind and 5 public school systems in Florida served as the subjects. Two sets of material were prepared and produced in braille and 18-point large type. One set was an experimental test, representing a shortened version of the Durrell, Form DE, containing the first section of each of its 4 subtests: Vocabulary Listening, Sentence Listening, Vocabulary Reading, and

Sentence Reading. The other was a set of practice materials which contained 10 original questions similar in type and identical in format to the experimental test, designed to provide subjects with an opportunity to become familiar with test format, tasks, and directions. The same format was used for the experimental large type test as was used for the original test; format changes for the braille edition were based upon successful practice. All subjects were given opportunity to learn the task and how to use the test materials; this was done with the practice materials prior to the administration of the experimental test. With 1 exception (Grade 1, braille, Sentence Reading), more than 50 per cent of the subjects from all reading levels of both braille and large type performed at an above chance level on all 4 parts of the experimental test. In general, a greater percentage of subjects who read large type than those who read braille were able to use the test. Second and third level readers were better able to use the test than first level readers. More difficulty was experienced with the reading than with the listening parts.

Apffel, Kelleher, Lilly, and Richardson (13) demonstrated a procedure for the systematic examination of individual rates and accuracy of progress of 60 moderately retarded children in selected beginning reading programs. Subjects were selected from the regular enrollment of schools for trainable children in Carmichael, California, and Honolulu, Hawaii, during the 1970-1971 school year. The principal criterion for participation was that students have at least minimal ability to use spoken language at the level expected to be encountered in 2 selected reading programs: DISTAR and Rebus Reading. Specifically, the criteria included: 1) CA of 10 to 15, 2) *Peabody Picture Vocabulary Test* (PPVT) language age at least 3.0, 3) presence of oral language understandable by the teacher, and 4) residence in a family setting. Students received 90 minutes of daily instruction, 1/2 hour each for reading, oral language, and motor training. Three experimental groups were formed in Carmichael: Group 1, DISTAR Reading and Peabody Language Development Kit (PLDK); Group 2, Rebus Reading and PLDK; and Group 3, DISTAR Reading and DISTAR Language. Two groups in Honolulu (Groups 4 and 5) were formed comparable to Groups 1 and 2. Progress for each child was measured by performance as reflected by the testing procedures in the assigned reading program. The *DISTAR Continuous Test of Reading I* was administered at 4-week intervals. Optimum progress was indicated when test results matched the child's place in the program. Evaluation for Rebus Reading involved maintaining records for the number of frames attempted, the number of correct responses, and the number of error responses. At 4-week intervals, these data were recorded as daily performance rates. Approximately 10 data points were available for each subject, permitting individual program projection graphs. In analyzing DISTAR data, accuracy of matching between the difficulty level and pacing of the program and the student's progress was reflected in the colineation, proximity, and regularity of the graph lines. The standard for comparison of individual graphs were the 4 graph patterns that were revealed when all graphs patterns were examined together. The Rebus data were used in an analogous manner; again, a set of standard performance patterns were discerned reflecting correct and error response trends. Nearly all participants demonstrated some capacity to profit from reading instruction. More important, according to the researcher, was that program decisions were based on demonstrated rate of progress in learning to read.

Carter (81) attempted to determine the relationship between IQ and reading achievement of educable retarded children (EMR) placed in 3 different types of educational settings, and to determine tentatively which setting produces the highest achievement. The 70 EMR students were selected from the following: 1) 20 students were randomly selected from 9 segregated, self-contained special classes; 2) 20 students were randomly selected from a school participating in "Plan A," which involved mainstreaming exceptional children through the regular program, but with considerable supportive personnel resources and inservice training for the regular teacher; and 3) 30 EMR students who remained within the regular class and received no extra services or resources. All students had been in their respective settings for at least 2 years. Each was administered the *Wechsler Intelligence Scale for Children* (WISC) and the *Iowa Tests of Basic Skills*. Little difference among groups was evidenced on any variable. Spearman Rank-Order correlation was computed to determine if there was a statistically significant relationship between intelligence and reading achievement. Each group demonstrated a significant relationship between WISC IQ and reading achievement scores. The researcher concluded that evidence to support one educational setting over another is lacking.

Evans and Bilsky (164) sought to evaluate the effectiveness of a letter discrimination training program specifically designed for mildly retarded children. Ninety New York City elementary school children, ranging in age from 78 to 164 months and ranging in IQ from 50 to 75, were selected on the basis of their poor performance on 2 screening tests of letter and letter sequence reversals. Subjects were placed into one of 3 training groups: 1) a similar-letter group which received discrimination training on similar target and distractor letters (*b*, *d* versus *d*, *b*, *p*, *q*); 2) a dissimilar-letter group which received discrimination training on dissimilar target and distractor letters (*b*, *d* versus *m*, *s*, *w*); and 3) a no-letter group which engaged in irrelevant activities. Subjects in each group received 7 training sessions, 5 to 15 minutes each, spread over 5 weeks. The letter training was comprised of simultaneous and delayed matching-to-sample. The Popp matching test of letter and sequence reversals, in both simultaneous and delayed forms, and the Matching and Alphabet subtests of the *Metropolitan Reading Readiness Test* (MRT) were the 4 post tests used. While letter training was always superior to no-letter training, and similar-letter training was better than dissimilar-letter training on every measure except the MRT-Alphabet, the analyses of variances showed a significant effect of type of training only in the Popp simultaneous test ($p < .05$). A *post hoc* analysis revealed the only significant difference to be between the similar-letter group and the combined other groups. Subsequent Aptitude by Treatment interaction analyses indicated that similar-letter training tended to facilitate the performance of only the younger and duller subjects.

Hansen and Lovitt (233) explored the relationships between pupils' ability to comprehend material read orally and material read silently, and their relative performance on 3 types of comprehension questions. Participants were a class of 7 learning-disabled boys, ages 9 to 12, of average intelligence from upper middleclass homes. All children were enrolled in the Curriculum Research Classroom at the Experimental Unit, University of Washington. Throughout 1 academic year in the Curriculum Research Classroom, daily records were kept on rate of reading (both silent and oral) and the percentages of correctly answered comprehension questions. The class was divided into 2 groups. Interventions were alternately focused on either oral reading or the comprehension of orally read material. There were 9 phases designed for the original study, with Phase 1 representing the baseline phase during which no intervention was arranged for either group. Interventions were then alternated throughout 1 academic year for the 2 groups. Daily percentages were based on an assigned total of 1,000 words from 2 basal reader series and a total of 60 comprehension questions (representing literal, sequence, and interpretation) to be answered immediately after completing the assignment. Throughout the year, there were 9 phases to the study. Intervention for oral reading consisted of practicing phrases composed of reading errors the student had committed during the previous oral reading session unless a predetermined reading rate had been achieved. The desired rate for oral reading was based on each pupil's median performance score during the phase preceding the intervention. For intervention involving comprehension, the student was required to correct each comprehension question previously answered incorrectly if his score did not meet or exceed a certain rate. Performance during the baseline phase was compared with combined scores (to equalize effect of the last 2 interventions) of the study's last 2 phases. The overall average for correct responses to questions for the group improved from 57 per cent to 73 per cent during the year. Relationships between types of comprehension questions remained unchanged, *i.e.*, the scores for recall type questions remained highest for 6 students, averaging 81 per cent. The lowest average comprehension score was for interpretation questions (66 per cent). While recall questions were more easily answered than sequence or interpretation-type questions, there was more improvement in the ability to answer interpretation questions than the other 2. All students improved in answering both oral and silent comprehension questions. Average improvement for oral reading was 16 per cent and 17 per cent for silent reading. All students exhibited higher oral than silent reading comprehension scores at the end of the year with a difference of 8 per cent, but the per cent change was greater for answering silent reading questions (35 per cent) than for answering oral reading questions (28 per cent).

A clinical population of 44 aphasics was rated on the severity of impairment of functional communication in each of 4 language modalities in a study by Duffy and Ulrich (142). The modalities were verbal comprehension, speech, reading, and writing. The subjects were generally representative of a moderately to severely impaired right-hemiplegic geriatric population of cerebral vascular etiology. Four subdivisions of Schuell's "Clinical Rating" scale were employed as the measure of functional communicative impairment. The subjects were rated independently by 2 clinicians from 0 (no impairment) to 6 (no functional ability), based on a composite impression of the patient's communicative behavior observed during 1 or more interviews as well as during the administration of the *Minnesota Test for Differential Diagnosis of Aphasia* and other testing procedures. Comparisons were made of the severity of impairment in each pair of language modalitites for the subjects as a group and for individual subjects. Correlation coefficients for severity ratings between modalities ranged from 0.68 to 0.83. Results indicated that all modalities are impaired to approximately the same degree and that differences between severity ratings across all modalities are small for the majority of aphasic subjects. Writing was the most severely impaired modality, receiving a significantly higher mean severity score ($p < .01$) when compared with each of the other modalities. The authors describe influences that may affect research data on aphasia, including subject selection (degree of severity of impairment), effects of tests, procedures and behaviors chosen to describe aphasics, and the definition of aphasia employed by investigators.

Boothe and Slifman (53) described the therapy program of a 29-year-old veteran, who, because of an injury, had been diagnosed as an expressive and receptive aphasic, with the expressive component being more serious. Difficulties included 1) dealing with the abstract, 2) grasping essential parts of a whole, 3) analyzing the whole into parts, 4) seeing common properties in different situations, 5) altering set patterns, 6) controlling impulses, 7) controlling attention, and 8) forming a complete thought. Daily 1-hour therapy encouraged use of the left (alternate) hand, and instruction first in the printed alphabet, then in an author-devised English as a Second Language (ESL) program. During the second month, the teaching of functional abilities connected with life survival was added. During the third month, the subject received additional practice with reading and handwriting drills and was enrolled in 2 physical education classes. By the fourth month of the training, he was placed with a psychologist in order to preserve positive self-image. At the termination of a 6-month therapy, the subject displayed fifth grade reading and handwriting skills.

The verbal behavior of 30 German aphasic patients (10 Broca's aphasics, 10 Wernicke's, and 10 total aphasics) was investigated by von Stockert and Bader (564) in order to describe the grammatical and lexical capacity they exhibited on the *Sentence Order Test* (SOT). The SOT consists of a series of sentences, written on cards, and cut into 3 parts. The subjects, ranging in age from 17 to 65, were asked to appropriately order 30 declarative sentences [NP + (V + NP)]. Ten of the 30 were normal sentences (NOR), 10 others were classed syntax versus semantic (SVS) which could be arranged in 2 ways (one of the ways sacrificed correct syntactical endings for an appropriate lexical semantic), and 10 were nonsense sentences (NS), which were grammatically structured. Sentences were presented in random order and there was no limit to the number of trials permitted. Eighty per cent of the normal sentences were correctly ordered by the Wernicke's aphasics, 75 per cent by the Broca's aphasic group, and 60 per cent were arranged correctly by the total aphasics. For the SVS sentences, 74 per cent were ordered according to the syntactic structure by the Wernicke's aphasics; only 11 per cent were syntactically ordered by the Broca's aphasics. For the group of grammatically structured nonsense sentences, 73 per cent were correctly arranged by the group of Wernicke's aphasics, while the performance of the Broca's aphasics reflected refusal, frustration, and random patterns. Broca's aphasics preferred to order the parts according to a logical string of lexical items, neglecting grammatical errors; Wernicke's aphasics arranged the material according to the grammatical structure, unruffled by odd lexical meaning. Most of the total aphasics performed more nearly like Wernicke's aphasics.

Richardson (462) addressed the possibility that mental imagery plays some part in the reading strategies adopted by individuals with acquired dyslexia. In Experiment 1, he re-analyzed data Marshall and Newcombe (1966) had obtained from a severely dyslexic and dysgraphic male who suffered brain damage in 1944 at the age of 20. Verbatim responses had been recorded of the subject trying to read aloud 2,000 words. Richarson isolated the 160 unambiguous words that were also included in the Paivio, Yuille, and Madigan (1968) norms for concreteness, imagery, and meaningfulness. Of these, the subject had successfully read 84 and had made unsuccessful attempts at 46. Partial correlation coefficients showed reading success to be significantly related to imageability and word length but not to concreteness, meaningfulness, or frequency. The subject's misreadings often involved the interchanging of a derived noun and its corresponding base. Therefore, in Experiment 2, simple and derived nouns were orthogonally varied with high versus low imageability and high versus low concreteness. Eighty words, 10 per condition, were presented to the same subject from Experiment 1 to be read aloud in 1 session. Verbatim responses were recorded. Only 1 word was read correctly and 44 others attempted. Five naive judges independently rated the semantic accuracy of the subject's responses on a 6-point scale. High imageable words elicited significantly more semantically accurate responses that did low imageable words—the only difference shown by an analysis of variance on the ratings. A partial correlation analysis revealed imageability to be the only variable to approach a significant relationship with the ratings of accuracy.

Gardner and Zurif (191) attempted to detail some of the meaning-implicated variables involved in oral reading. By observing subjects with various types of language impairment on tasks involving 2 processes differentially effected by brain damage, namely reading and naming, they hoped to underline the critical variables involved in the 2 processes. In Experiment 1, 38 middle-aged, working class males in the Aphasic Service of the Boston VA Hospital served as subjects. They were classified as either Broca's, Wernicke's, or global aphasics or alexics without agraphia. Eighty-four common English words, distributed across 7 categories of varying syntactic category, length, and operativity (manipulability) of their referents, were presented to be read aloud in one or 2 sessions. Analyses of variances showed word category to significantly effect readability for all 4 subgroups of subjects. A binomial test indicated operative words to lead to fewer errors than figurative words. In Experiment II, a similar sample of 38 subjects read and named 72 readily-depictable objects, half of which were operative and half figurative. Relative latencies to response were measured in reading and naming sessions one week apart. All subjects except alexics showed an advantage of reading over naming. Although there was no test of significance, operative words led to shorter latencies than did figurative words. In Experiment III, 5 alexics, 3 of whom had agraphia, were given a special reading test. A chi-square analysis revealed that agraphics who read words holistically read concrete nouns most quickly, even though the nouns were relatively long; whereas subjects without agraphia, who read words letter by letter, read shorter words fastest regardless of syntactic category.

Annotated bibliography[1]

1. AARON, ROBERT L.; CALL, LOUIS T.; & MUENCH, SALLY. A language arts program for disturbed adolescents. *Journal of Reading*, December 1975, *19*, 208-213. (V-11)

    Compares attitudes toward school, on-task behavior, and pretest and post tests of intelligence of students randomly assigned to a computer managed individualized program (N=65) or a basal reader program (N=61). Subjects were 14- to 18-year-old boys in a youth development center.

2. AARON, ROBERT L.; MILLER, LEWIS; & SMITH, ELIZABETH. Reading habits of behaviorally disordered males: a study. *Journal of Reading*, October 1975, *19*, 28-32. (IV-18)

    Reports method of selection, type, specific book checked out from the library, and whether it was actually read—based on interviews with 82 incarcerated youthful offenders, ages 13-19.

3. ADAMS, ANNE H., & HARRISON, CATHY B. Using television to teach specific reading skills. *The Reading Teacher*, October 1975, *29*, 45-51. (V-6)

    Reports survey results from 228 fourth, fifth, and sixth graders asked about television viewing habits, preferences, opinions regarding aid in reading, and words observed. Compares word list from the survey with a word frequency list.

4. ALDEN, LYNN; RAPPAPORT, JULIAN; & SEIDMAN, EDWARD. College students as interventionists for primary-grade children. *American Journal of Community Psychology*, September 1975, *3*, 261-271. (V-5)

    Analyzes preprogram and post program school behavior and reading performance of kindergarten and first graders from poverty level families given reading skills tutoring in an individual companionship program or in a no-additional contact control condition over 12 weeks. Subjects were 32 black and 16 white children and 22 undergraduate volunteers.

5. ALEXANDER, J. ESTILL, & FILLER, RONALD CLAUDE. *Attitudes and reading*. Newark, Delaware: International Reading Association, 1976. (I)

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[1] Numbers have been assigned to major headings and subheadings in the first part of the summary as cross reference aids. At the end of each item in this *Annotated bibliography*, a number in parentheses shows the classification under which the item is discussed.

Presents a review of selected studies dealing with these 2 variables. Includes information relative to construction and interpretation of assessment instruments and presents attitude scales for grades 1 through 3 and for grades 4 through 6.

6. ALEXANDER, KARL L., & GRIFFIN, LARRY J. School district effects on academic achievement: a reconsideration. *American Sociological Review*, February 1976, *41*, 144-152. (II)

   Reviews a report of school effectiveness using an organizational model. Performs similar regression analyses using academic achievement test scores from grades 3, 5, 7, and 9 in 24 school districts with and without IQ scores included.

7. ALLINGTON, RICHARD L.; GORMLEY, KATHLEEN; & TRUEX, SHARON. Poor and normal readers achievement on visual tasks involving high frequency, low discriminability words. *Journal of Learning Disabilities*, May 1976, *9*, 292-296. (IV-14)

   Tests the perceptual deficit hypothesis using tasks of matching, recognition, reproduction from memory, and oral reading of isolated words. Subjects were 12 below average and 12 above average third grade readers in a suburban school.

8. ALPERT, JUDITH LANDON. Do teachers adapt methods and materials to ability groups in reading? *California Journal of Educational Research*, May 1975, *26*, 120-123. (V-10)

   Codes reading instructional emphasis as meaning, meaning-code, or code of the 3 top and 3 bottom reading groups of 15 second grade teachers from tape recordings of 3 sessions. Uses chi square to compare teaching methods and materials of the high and low ability groups.

9. ALPERT, JUDITH LANDON. Teacher behavior and pupil performance: reconsideration of the mediation of Pygmalion effects. *The Journal of Educational Research*, October 1975, *69*, 53-57. (V-5)

   Compares reading gains of top and bottom reading groups receiving increased reading time, materials, and attention with control reading group gains. Subjects were 352 second graders and 17 teachers in 13 New York City Catholic schools. Schools were randomly assigned to treatment or observation only conditions.

10. ALTSCHULL, J. HERBERT. Chronicle of a democratic press in Germany before the Hitler takeover. *Journalism Quarterly*, Summer 1975, *52*, 229-238. (III-8)

    Traces the growth of a democratic press in Germany, with special reference to Prussia, up to the collapse of free institutions in the 1930's.

11. ANGELOTTI, MICHAEL; BEHNKE, RALPH R.; & CARLILE, LARRY W. Heart rate: a measure of reading involvement. *Research in the Teaching of English*, Fall 1975, *9* (*2*), 192-199. (IV-18)

    Compares subjective responses to reading fiction and history texts measured by a telemeter and verbal report. Subjects were 20 seventh grade boys attending a university school.

12. ANNIS, LINDA, & DAVIS, J. KENT. The effect of encoding and an external memory device on note taking. *Journal of Experimental Education*, Winter 1975, *44*, 44-46. (IV-5)

    Investigates the function of class notes as memory aids and/or transformation of lecture material into a personally meaningful form. Subjects were 85 college sophomores randomly assigned to one of 7 note-taking and review conditions.

13. APFFEL, JAMES A.; KELLEHER, JOHN; LILLY, M. STEPHEN; & RICHARDSON, RALPH. Developmental reading for moderately retarded children. *Education and Training of the Mentally Retarded*, December 1975, *10*, 229-235. (VI)

    Demonstrates procedures for systematic examination of individual rates and progress by 60 moderately retarded children (CA 10-14) using the DISTAR and Rebus beginning reading programs.

14. ARNOLD, RICHARD D. Class size and reading development. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 413-421. (I)

    Summarizes some of the literature on class size and reading achievement, devoting special attention to relevant factors, such as classroom practices, facilities, adjunctive staff, discipline of the children, teacher morale and training, and reading disability.

15. ARNOLD, RICHARD D., & SHERRY, NATALIE. A comparison of the reading levels of disabled readers with assigned textbooks. *Reading Improvement*. Winter 1975, *12*, 207-211. (V-11)

    Tests for differences between means of student instructional reading level and publisher reported grade level of textbooks in reading, social studies, and English. The students were 24 third, fourth, or fifth graders referred to a reading clinic.

16. ARTLEY, A. STERL. Good teachers of reading—who are they? *The Reading Teacher*, October 1975, *29*, 26-31. (II)

    Reports highlights from a survey of approximately 100 education majors asked what they recalled about their own experience in learning to read.

17. ASCHER, MARCIA, & ASCHER, ROBERT. The quipu as a visible language. *Visible Language*, Autumn 1975, *9*, 329-356. (I)

    Describes Incan quipu, devices made of cotton cords, based upon a recent study of most of the world's known quipu. Discusses connections between the quipu and civilization, such as the purpose of writing in early civilization.

18. ASKOV, EUNICE N., & KAMM, KARLYN. Context clues: should we teach children to use a classification system in reading? *The Journal of Educational Research*, May-June 1976, *69*, 341-344. (V-6)

    Compares scores on criterion-referenced context clues tests administered to 133 third, fourth, and fifth graders in 2 schools. Teachers in 1 of the schools had taught use of context clues systematically during the 2-week pretest and post test interval.

19. ASPY, DAVID N., & BUHLER, JUNE H. The effect of teachers' inferred self concept upon student achievement. *The Journal of Educational Research*, July/August 1975, *68*, 386-389. (IV-15)

    Categorizes 6 third grade teachers as high or low self concept based on self-ratings and 3 observers' ratings. Assesses relationship of this to academic achievement gains of each teacher's 5 highest and 5 lowest IQ students. Total number of students was 120 third graders.

20. ATWOOD, L. ERWIN, & SANDERS, KEITH R. Perception of information sources and likelihood of split ticket voting. *Journalism Quarterly*, Autumn 1975, *52*, 421-428. (III-1)

    Interviews 419 voters from Southern Illinois and suburban St. Louis County regarding information source relative to amount and kind of information and assesses perceived believability, influence, and usefulness of information. Factor analyzes responses and investigates the relationship of party affiliation and ticket splitting to the resulting factors.

21. AUSTIN, GILBERT R., & POSTLETHWAITE, T. NEVILLE. Cognitive results based on different ages of entry to school: a comparative study. *Journal of Educational Psychology*, December 1974, *66*, 857-863. (IV-13)

    Reanalyzes data from international studies on reading, mathematics, and science achievement of 10- and 13-year-old children in relationship to typical age at entry into school.

22. AYERS, JERRY B.; ROHR, MICHAEL E.; & AYERS, MARY N. Perceptual-motor skills, ability to conserve, and school readiness. *Perceptual and Motor Skills*, April 1974, *38*, 491-494. (IV-6)

Determines the relationship among perceptual patterns, motor development, logical thinking, and school readiness in 94 children.

23. AYLLON, TEODORO; LAYMAN, DALE; & KANDEL, HENRY J. A behavioral-educational alternative to drug control of hyperactive children. *Journal of Applied Behavior Analysis*, Summer 1975, *8*, 137-146. (IV-13)

Reports observed hyperactivity and performance during reading and mathematics classes of 3 children when they were on and off medication. Compares their baseline behaviors with reward contingent behaviors.

24. BADER, LOIS A. Certification requirements in reading: a trend. *Journal of Reading*, December 1975, *19*, 237-240. (II)

Reports 1975 survey findings from all 50 states and the District of Columbia education departments regarding the extent to which states required preparation in reading instruction of secondary teachers.

25. BADIAN, NATHLIE A., & SERWER, BLANCHE L. The identification of high-risk children: a retrospective look at selection criteria. *Journal of Learning Disabilities*, May 1975, *8*, 283-287. (IV-14)

Uses first grade reading achievement to assess the effectiveness of screening tests administered to 62 kindergarten children who had been identified as having a probable learning disability.

26. BAIRD, JAY W. *The mythical world of Nazi war propaganda 1939-1945*. Minneapolis: University of Minnesota Press, 1974. (III-1)

Integrates information from interviews of German propagandists and captured archival material with traditional analyses of the period. Analyzes the development of Nazi wartime propaganda as a function of National Socialist ideology.

27. BAKER, KENDALL L., & WALTER, B. OLIVER. The press as a source of information about activities of a state legislature. *Journalism Quarterly*, Winter 1975, *52*, 735-740, 761. (III-14)

Analyzes content of 6 of the 8 Wyoming dailies from December, 1972, to March, 1973, in relation to results of a telephone poll of 424 residents and a survey of 70 of the 93 legislators regarding state issues and personalities.

28. BALL, FREDERICK; WOOD, CHRISTINE; & SMITH, EDWARD E. When are semantic targets detected faster than visual or acous-

tic ones? *Perception and Psychophysics*, January 1975, *17*, 1-8. (IV-8)

Investigates effects of context and size of perceptual units in 3 experiments requiring subjects to read or scan meaningful or scrambled sentences for a semantic, visual, or acoustic target. A total of 81 undergraduates participated.

29. BALOW, BRUCE; RUBIN, ROSALYN; & ROSEN, MARTHA J. Perinatal events as precursors of reading disability. *Reading Research Quarterly*, 1975-1976, *11* (*1*), 36-71. (I)

Reviews results of major studies exploring the relation between reading disability and complications of pregnancy and birth, including methodological issues.

30. BARNES, BUCKLEY R., & CLAWSON, ELMER U. Do advance organizers facilitate learning? Recommendations for further research based on an analysis of 32 studies. *Review of Educational Research*, Fall 1975, *45*, 637-659. (I)

Summarizes studies classified first by beneficial/no beneficial effects of advance organizers, and then by length of treatment, student ability level, student grade level, task level, subject area, and type of organizers.

31. BARR, REBECCA. Influence of instruction on early reading. *Interchange*, 1975, *5*, 13-22. (I)

Reviews selected studies of reading instruction conducted in natural settings to identify methods, materials, and learner influences on how children learn to read.

32. BARR, REBECCA. Influence of reading materials on response to printed words. *Journal of Reading Behavior*, Summer 1975, *7*, 123-135. (IV-9)

Identifies first graders' decoding strategies as sight (N=21) or phonics (N=11). Half of the children had received predominantly sight word instruction and half phonics. Examines their oral reading errors on an untaught word list to assess the influence of word characteristics versus decoding strategy by instructional method and word type.

33. BARRON, RICHARD F., & STONE, V. FRANK. The effect of student-constructed graphic post organizers upon learning vocabulary relationships. In Phil L. Nacke (Ed.) Interaction: research and practice for college-adult reading. *Twenty-third Yearbook of the National Reading Conference*, 1974. Pp. 172-175. (IV-5)

Focuses on mobilizing a meaningful learning set to read a 3,000-word passage on mental health. Subjects were 141 tenth and eleventh graders randomly assigned to experimenter-made advance organizer student-made post organizer, or control (no organizer) conditions.

34. Barry, Jeanne Gardner, & Stevenson, Timothy E. Using a computer to calculate the Dale-Chall formula. *Journal of Reading*, December 1975, *19*, 218-222. (III-3)

Uses published readability levels of several texts from grades 4 through 15 as criteria to validate a computer program for estimating readability. Hundred word samples were fed directly into the computer.

35. Bartel, Nettie R.; Grill, J. Jeffrey; & Bartel, Helmut W. The syntactic-paradigmatic shift in learning disabled and normal children. *Journal of Learning Disabilities*, October 1973, *6*, 518-523. (IV-14)

Assesses and compares the extent to which 48 normal and 48 learning disabled children, each subdivided into older (CA 10-1 and above) and younger (CA 10 and below) age categories, respond to a word association test.

36. Barton, K.; Bartsch, T.; & Cattell, R. B. Longitudinal study of achievement related to anxiety and extraversion. *Psychological Reports*, August 1974, *35*, 551-556. (IV-15)

Uses a repeated measures design to analyze relationships among standardized achievement scores, personality measures, level of intelligence, and sex in over 300 sixth and seventh graders.

37. Barton, K.; Dielman, T. E.; & Cattell, R. B. Child rearing practices and achievement in school. *The Journal of Genetic Psychology*, March 1974, *124*, 155-165. (IV-16)

Investigates the relationship between parental behaviors toward children and school achievement (including reading) in a total of 311 sixth and seventh graders.

38. Bauer, David H. The effect of instructions, anxiety, and locus of control on intelligence test scores. *Measurement and Evaluation in Guidance*, April 1975, *8*, 12-19. (IV-15)

Analyzes the effects of the interactions of test instructions, locus of control, and anxiety on IQ scores and notes sex differences. Subjects were 113 fifth grade pupils from 2 suburban schools.

39. Baum, Dale D. A comparison of the WRAT and the PIAT with learning disability children. *Educational and Psychological Measurement*, Summer 1975, *35*, 487-493. (V-12)

Correlates subtests of 2 individual screening tests of academic achievement administered to 82 male and 18 female children, ages 7-11, randomly selected from special classes.

40. BEACH, RICHARD. Issues of censorship and research on effects of and response to reading. *Journal of Research and Development in Education*, Spring 1976, *9*, 3-21. (I)

Surveys research on response to reading and the effects of reading as an empirical investigation into the need for censorship. Investigates research on the effect of personality, values, sex-role, age and literary training on response. Views research on attitude towards sex and violence, the effects of reading obscenity on sexual behavior and the overall effects of censorship.

41. BEATTY, RICHARD W. A two-year study of hard-core unemployed clerical workers: effects of scholastic achievement, clerical skill, and self-esteem on job success. *Personnel Psychology*, Summer 1975, *28*, 165-173. (IV-15)

Correlates pretraining and post training scores on tests of academic achievement, clerical ability, and self-esteem with weekly earnings and with supervisor ratings of work performance after 6 months and 2 years. Subjects were the 23 out of 41 women still employed in the program.

42. BEDWELL, C. H. The significance of visual, ocular and postural anomalies in reading and writing. In William Latham (Ed.) The road to effective reading. *Tenth annual study conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 73-81. (IV-1)

Discusses 8 case studies of poor readers, including neurological, psychological, vision, and reading tests, whose posture was observed and eye movements recorded during oral and silent reading and during writing.

43. BENSON, D. FRANK. Alexia. In John T. Guthrie (Ed.) *Aspects of reading acquisition*. Baltimore and London: The Johns Hopkins University Press, 1976. Pp. 7-36. (I)

Collates information of past 100 years in neurological studies of acquired reading disorders. Outlines anatomical correlates for reading from the study of acquired reading disorders.

44. BENTOVIM, MARGARET, & STEVENS, JENNY. Adult illiteracy in England and Wales. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 472-478. (I)

Reports illiteracy estimates from surveys of reading standards. Describes developments in the English Right to Read campaign.

45. BIDWELL, CHARLES E., & KASARDA, JOHN D. School district organization and student achievement. *American Sociological Review*, February 1975, *40*, 55-70. (IV-13)

Links 5 environmental conditions of 104 Colorado school districts, 3 components of district structure (*e.g.*, pupil/teacher ratio), and qualification level of professional staff in a causal model to the median reading and mathematics achievement test scores of the districts' high school students.

46. BLACK, F. WILLIAM. Cognitive, academic, and behavioral findings in children with suspected and documented neurological dysfunction. *Journal of Learning Disabilities*, March 1976, *9*, 182-187. (IV-14)

Compares matched samples of 25 children with known brain damage and 25 children with suspected neurological dysfunction on tests of intelligence, visual perception, and academic achievement and on ratings by a neurologist and a psychologist.

47. BLANTON, WILLIAM E., & SMITH, CYRUS F., JR. 1974 Review of research on college-adult reading. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 1-66. (I)

Reviews 261 studies of college-adult reading, including 39 unpublished doctoral dissertations and 104 ERIC documents.

48. BLOM, GASTON; JANSEN, MOGENS; & ALLERUP, PETER. A cross national study of factors related to reading achievement and reading disability. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 479-493. (IV-16)

Uses cluster analysis of questionnaires to investigate the relation of reading to cultural, school, language, teacher, family, personality, biological, and political factors. Return rate was 67 per cent or 24 respondents in 12 countries.

49. BOEHNLEIN, MARY MAHER, & GANS, THOMAS G. Competency in teaching reading of field based and on-campus university students. *Journal of Reading*, November 1975, *19*, 112-116. (II)

Uses tests accompanying a methods textbook in a pretest/post test design to compare 36 field based students with 46 on-campus students on competency in teaching reading.

50. BOGART, LEO. How the challenge of television news affects the prosperity of daily newspapers. *Journalism Quarterly*, Autumn 1975, *52*, 403-410. (I)

Summarizes findings in several studies and discusses news content in television and newspapers, the effect of TV news on newspaper circulation, and the relation of newspaper editorial content to advertising and circulation growth.

51. BOOK, ROBERT M. Predicting reading failure: a screening battery for kindergarten children. *Journal of Learning Disabilities*, January 1974, *7*, 43-47. (IV-14)

Formulates a predictive index for the identification of reading difficulties. Bases the index on 435 children followed through grade 1, and 219 children followed through grade 2.

52. BOOTH, HEATHER. Compensatory preschool—do its effects justify its existence? *Educational Review*, November 1975, *28*, 51-59. (I)

Summarizes findings in studies and reviews of studies of preschool education in the United States and England.

53. BOOTHE, LORRAINE M., & SLIFMAN, EILEEN B. A key to unlock aphasia: a multi-level approach. In Gene Kerstiens (Ed.) *Proceedings of the Seventh Annual Conference of the Western College Reading Association.* Volume VII: Reading—update: ideals to reality, 1974. Pp. 13-16. (VI)

Describes the 6-month therapy program of a man who, as the result of an injury, was unable either to read or write.

54. BRADSHAW, JOHN L. Peripherally presented and unreported words may bias the perceived meaning of a centrally fixated homograph. *Journal of Experimental Psychology*, December 1974, *103*, 1,200-1,202. (IV-6)

Uses tachistoscopic presentation of stimuli to 16 subjects to investigate the effect of peripherally presented words on interpretation of the targeted word.

55. BRADSHAW, JOHN L. Three interrelated problems in reading: a review. *Memory and Cognition*, March 1975, *3*, 123-134. (I)

Reviews the literature on word perception, visual processing, and direct access to meaning versus phonological recoding. Discusses implications for alternative coding systems.

56. BRAGSTAD, M. BERNICE. Teaching students how to learn. *Journal of Reading*, December 1975, *19*, 226-230. (V-7)

Uses preprogram and post program grades and self-reports of learning techniques to evaluate the effectiveness of a program focusing on learning strategies for high school geometry. There were 23 experimental and 23 control subjects.

57. **Brandt, James David.** Internal versus external locus of control and performance in controlled and motivated reading-rate improvement instruction. *Journal of Counseling Psychology*, September 1975, *22*, 377-383. (IV-15)

Investigates the relationship of personality to reading instruction involving timed tests and graphs versus mechanically controlled reading speed, as well as comprehension tests. Subjects were 55 volunteers in a college study skills program randomly assigned to control or experimental conditions.

58. **Braun, Carl; Neilsen, Allan R.; & Dykstra, Robert.** Teacher expectation: prime mover or inhibitor? In Brother Leonard Courtney (Ed.) *Reading interaction: The teacher, the pupil, the materials.* Newark, Delaware: International Reading Association, 1976, 40-48. (I)

Examines the literature on self-fulfilling prophecy or the effect of teacher perception of children on children's school behavior, especially reading.

59. **Breiter, Joan C.** Reading or listening: a comparison of techniques of instruction in elementary social studies. *The Alberta Journal of Educational Research*, June 1975, *21*, 130-140. (IV-4)

Analyzes pretreatment and post treatment comprehension of the identical social studies material presented orally or in writing to 570 sixth graders. Subjects were grouped by intelligence level, reading ability, and sex and were randomly assigned to treatment conditions.

60. **Brewer, Joan Scherer.** A guide to sex education books. Dick active, Jane passive. *Interracial Books for Children Bulletin*, 1975, *6* (*3 & 4*), 1, 12-13. (III-2)

Reports selected findings in a survey of sex education books recommended by community librarians. Provides brief reviews of 14 of these.

61. **Briggs, Raymond, & Hocevar, Dennis J.** A new distinctive feature theory for upper case letters. *The Journal of General Psychology*, July 1975, *93*, 87-93. (IV-6)

Validates a similarity index of printed capital letters based on distinctive feature analysis by predicting confusability on 7 previously published visual confusion matrices empirically generated in a variety of ways.

62. BRITTON, GWYNETH E. Assessing preservice reading methods courses. *Reading Improvement*, Summer 1975, *12*, 71-74. (II)

Uses a questionnaire on perceived competency to teach reading to compare 42 teachers from a traditional methods course with 20 teachers from a 5-hour course including practicum.

63. BRITTON, GWYNETH E. Danger: State adopted texts may be hazardous to our future. *The Reading Teacher*, October 1975, *29*, 52-58. (III-2)

Analyzes content of 20 reading series for racism, sexism, and sex stereotyping.

64. BRYANT, BARBARA E.; CURRIER, FREDERICK P.; & MORRISON, ANDREW J. Relating life style factors of person to his choice of a newspaper. *Journalism Quarterly*, Spring 1976, *53*, 74-79. (III-4)

Investigates the relationship of attitudes, activities, and interests to newspaper choice and readership. Questionnaires were administered to a representative sample of 900 adult Toronto residents.

65. BRYANT, PETER E. Cross-modal development and reading. In Drake D. Duane & Margaret B. Rawson (Eds.) *Reading, perception and language*. Baltimore: York Press, 1975. Pp. 195-213. (I)

Reviews selected research on the ability to organize the various sources of sense information. Questions whether cross-modal organization is a limiting factor in learning to read.

66. BURGETT, RUSSELL EDWARD, & DODGE, ROGER W. Is there a difference between learning disability and reading personnel? *Journal of Reading*, April 1976, *19*, 540-544. (II)

Administers a questionnaire on 39 role responsibilities to 18 certified individuals in reading and 23 in learning disabilities from a random sample of 20 Wisconsin school districts. Compares performance, training, and salaries reported by the 2 types of responders.

67. BURKE, ELIZABETH, & LEWIS, D. G. Standards of reading: a critical review of some recent studies. *Educational Research*, June 1975, *17*, 163-174. (I)

Emphasizes statistical analysis and conclusions in a critical review of 6 large scale studies of British children's reading attainment.

68. BURMEISTER, LOU E. A chart for the new Spache formula. *The Reading Teacher*, January 1976, *29*, 384-385. (IV-19)

Provides a table of estimated readability levels at the intersections of average sentence length and per cent of hard words to obviate the necessity of using a formula.

69. BURNS, PAUL C. Reading research that has influenced reading instruction: 1960-1974. *School Media Quarterly*, Winter 1975, *3*, 142-148. (I)

Identifies and describes the 10 most influential reading studies from 1960 to 1974.

70. BUTTERWORTH, THOMAS W., & MICHAEL, WILLIAM B. The relationship of reading achievement, school attitude, and self-responsibility behaviors of sixth-grade pupils to comparative and individualized reporting systems: implications for improvement of validity of the evaluation of pupil progress. *Educational and Psychological Measurement*, Winter 1975, *35*, 987-991. (V-10)

Employs a quasi-experimental 2 × 2 × 2 factorial design (treatment × IQ × sex) with dependent variables of test scores in reading, intellectual achievement responsibility, and attitudes toward school. Treatment was traditional letter grades versus narrative statements evaluating school performance. Subjects were 600 sixth graders in 2 school systems.

71. BYRNE, MARY ANN, & MASON, GEORGE E. When pictures and words conflict. *The Elementary School Journal*, February 1976, *76*, 310-314. (IV-10)

Examines 23 math teachers' scoring of 594 fourth graders' answers to a problem with a discrepancy between the illustration and the text thereby invalidating the answers in the teacher's edition of the textbook.

72. CALFEE, ROBERT C. A proposal for practical (but good) research on reading. *Research in the Teaching of English*, Spring 1976, *10*, 41-50. (I)

Considers previous research syntheses, methodology, and particular studies relevant to investigations of learning factors which can influence classroom practices.

73. CALTHROP, KENYON. *Reading together: an investigation into the use of the class reader.* London: Heinemann Educational Books, 1971 (paperback ed. 1973). (V-7)

Draws on questionnaires from over 600 secondary school teachers in England, on interviews and observations of some of them, and on interviews and questionnaires from some of their students in a description of successful work in more than 1 class with particular prose books. Lists the most popular books according to the teachers and children's reactions to some of the books.

74. CALVERT, KENNETH H. Reading in the schools: as principals see it. *North Carolina Education*, September 1975, 14-15. (II)

Reports results of a survey of 600 elementary through high school principals (400 respondents) regarding the functioning of and their attitudes toward reading instruction in their schools.

75. CAMP, BONNIE W., & DAHLEM, NANCY W. Paired-associate and serial learning in retarded readers. *Journal of Educational Psychology*, June 1975, *67*, 385-390. (IV-5)

Compares retarded readers' performance on paired associate and serial learning tasks in 2 experiments in which the tasks differed in difficulty. Subjects included 71 children, ages 9 to 13, reading below third grade level.

76. CAMP, BONNIE W., & ZIMET, SARA G. Classroom behavior during reading instruction. *Exceptional Children*, October 1975, *42*, 109-110. (IV-14)

Compares behavior of 45 children in high, middle, and low ability reading groups in 2 first grade classes observed and coded by 2 observers over a 2½-month period.

77. CAMP, BONNIE W., & ZIMET, SARA G. The relationship of teacher rating scales to behavior observations and reading achievement of first-grade children. *The Journal of Special Education*, Winter 1974, *8*, 353-359. (IV-13)

Intercorrelates data collected on 2 first grades (N=27 and 22) including teacher ratings on 2 scales, 2 independent observers' classroom behavior ratings, and results of group intelligence and 4 standardized reading achievement tests.

78. CARPENTER, TERYLE W., & JONES, YVONNE. Improving comprehension and rate gain at the college level. *Journal of Reading*, December 1975, *19*, 223-225. (V-8)

Reports results of a 14-week reading improvement course on 109 education students' achievement in vocabulary, comprehension, and rate assessed by a standardized reading test.

79. CARRINGER, DENNIS C., & DOBOS, ARTHUR E. The effect of training on visual-motor coordination, figure-ground perception and perception of form constancy in kindergarten children. *The New England Reading Association Journal*, 1976, *11*, (2), 21-23. (V-4)

Reports mean gain on visual perception test scores subsequent to tachistoscopic perceptual training. Subjects were 26 middleclass kindergarteners.

80. CARSTENS, PAUL W., & MCKEAG, ROBERT A. Cloze test scores for assessing reading comprehension: some considerations for interpreting data. *Reading Improvement*, Spring 1974, *12*, 8-10. (V-12)

Analyzed precloze and post cloze test results from 8 university juniors in 5 different ways to observe the effect on rankings.

81. CARTER, JOHN L. Intelligence and reading achievement of EMR children in three educational settings. *Mental Retardation*, October 1975, *13*, 26-27. (VI)

Compares correlations of IQ and reading achievement of children in segregated, self-contained classrooms, a regular class with supportive services, and a traditional class. A total of 70 educable mentally retarded children were randomly selected.

82. CARTER, JOHN F., & VAN MATRE, NICHOLAS H. Note taking versus note having. *Journal of Educational Psychology*, December 1975, *67*, 900-904. (IV-5)

Varies instructions to take or not take notes during a recorded lecture, to review or not review lecture information or notes taken, interval between lecture and test of retention, and type of test. Data from 172 randomly assigned undergraduates were analyzed by verbal ability level.

83. CARVER, RONALD P. Designing reading rate research. In Geoge H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 241-245. (I)

Discusses implications of findings in selected studies of accuracy and efficiency of reading comprehension, rate using different definitions of word length, administration instructions, and passage difficulty relative to subject ability.

84. CARVER, RONALD P. Manipulation of attention during reading using programmed prose. *Journal of Reading Behavior*, Fall 1975, *7*, 241-254. (IV-5)

Investigates the joint effects of motivation (bonus for correct answers) and facilitation of learning (modified programed texts). Subjects were 58 paid college students tested either prior to reading or after reading the original or revised version of a passage, under bonus or no bonus conditions.

85. CARY, CHARLES D. Patterns of emphasis upon Marxist-Leninist ideology: a computer content analysis of Soviet school history, geography, and social science textbooks. *Comparative Education Review*, February 1976, *20*, 11-29. (III-2)

Investigates the treatment of Marxist-Leninist ideology in 3 subjects as taught in Soviet schools. Five hypotheses are stated and tested concerning patterns of relative and developmental emphasis upon Marxism-Leninism. Discusses implications of these patterns for how young Soviets (ages 10-17) acquire a belief system.

86. CASEY, RHODA LINTZ. Through federal fundingland with gun and camera. In Gene Kerstiens (Ed.) *Proceedings of the Seventh Annual Conference of the Western College Reading Association.* Volume VII: Reading—update: ideals to reality, 1974. Pp. 41-45. (V-11)

Introduces a composite reading and writing program, designed to serve approximately 200 community college students requiring remedial assistance.

87. CHAFFEE, STEVEN H., & IZCARAY, FAUSTO. Mass communication functions in a media-rich developing society. *Communication Research*, October 1975, *2*, 367-394. (III-1)

Surveys a sample of over 296 people in Barquisimeto, Venezuela, regarding their motivations for using or avoiding newspaper and television news about government and politics.

88. CHANG, THERESA S. Self-concepts, academic achievement, and teacher's rating. *Psychology in the Schools*, January 1976, *13*, 111-113. (IV-15)

Correlates child's and teacher's ratings of the child's self concept, and self concept ratings with standardized academic achievement. Data were analyzed on 198 primarily lower-class children by grade level (fourth through sixth), sex, and ethnic group membership.

89. CLARK, MARGARET. Language and reading—a study of early reading. In William Latham (Ed.) The road to effective reading. *Tenth annual study conference of the United Kingdom Reading Association.* London: Ward Lock Educational, 1975. Pp. 17-26. (V-3)

Analyzes results of intelligence and reading tests and parent interviews for strengths and weaknesses of 32 children who were already reading at school entry.

90. CLAY, MARIE M. Early childhood and cultural diversity in New Zealand. *The Reading Teacher*, January 1976, *29*, 333-342. (IV-16)

Compares scores on reading and language tests of 32 monolingual English speaking Maori, 64 monolingual English speaking white, and 32 bilingual Samoan children from school entry at age 5 over a 2-year period.

91. CLAY, MARIE M. Research in brief: orientation to the spatial characteristics of the open book. *Visible Language*, Summer 1974, *8*, 275-282. (IV-17)

Discusses theoretical explanations of hand behavior while reading observed in identical quadruplets during their first year in school.

92. CLICK, J. W. Comparison of editorial content of *Ebony* magazine, 1967 and 1974. *Journalism Quarterly*, Winter 1975, *52*, 716-720. (III-2)

Tests the hypothesis that 1974 editorials in the leading black magazine contain more black oriented social issues content and less entertainment content than the 1967 editorials.

93. COFFEY, PHILIP. A quantitative measure of bias in reporting of political news. *Journalism Quarterly*, Fall 1975, *52*, 551-553. (III-2)

Uses 3 different methods of content analysis on a sample of daily newspapers in Colorado for a short period before the 1974 general election to examine the effect of management attitudes on political news reporting.

94. COHEN, JUDITH H. The effect of content area material on cloze test performance. *Journal of Reading*, December 1975, *19*, 247-250. (IV-13)

Examines the effect of content from seventh grade textbooks in literature, social studies, and science on cloze test performance, controlling for content, readability level, and students' reading achievement. Subjects were 63 randomly drawn seventh graders from a predominantly white, middleclass junior high school.

95. COHEN, SHARI. A comparison of crime coverage in Detroit and Atlanta newspapers. *Journalism Quarterly*, Winter 1975, *52*, 726-730. (III-2)

Assesses criminal offenses in Atlanta and Detroit in relationship to amount and type of newspaper coverage over a 2-week period. Compares the handling of crime news in these cities.

96. COHN, MARVIN. Letter recognition difficulties: their real nature. In Robert T. Williams (Ed.) *Insights into why and how to read*. Newark, Delaware: International Reading Association, 1976. Pp. 70-75. (IV-6)

    Explores the letter recognition difficulties of a group of largely first grade children from lower socioeconomic families. Presents an error frequency chart and correlates these with figures for the frequency of letter use in English. Sample included 322 children.

97. COKE, ESTHER U. Reading rate, readability, and variations in task-induced processing. *Journal of Educational Psychology*, April 1976, *68*, 167-173. (IV-12)

    Analyzes relationships among reading rate, readability, and 2 kinds of search tasks while reading. Subjects were 68 paid high school volunteers who read 8 easy and 8 difficult passages and either looked for synonyms or exact matches to target lists.

98. COLARUSSO, RONALD P., & GILL, SALLY. Selecting a test of visual perception. *Academic Therapy*, Winter 1975/76, *11*, 157-167. (V-12)

    Lists, in tabular form, age range, standardization population, time requirements, number of items, group or individual administration, need for consumable materials, and reliability coefficients reported for 14 tests of visual functions.

99. COLARUSSO, RONALD P.; MARTIN, HANNAH; & HARTUNG, JOSEPH. Specific visual perceptual skills as long-term predictors of academic success. *Journal of Learning Disabilities*, December 1975, *8*, 651-655. (IV-6)

    Estimates predictive validity of a developmental skills test administered to 57 kindergarteners and 68 first graders attending private schools in Atlanta. Subjects included 20 per cent black and were mostly middleclass. Criteria were standardized academic achievement tests administered 2 years later.

100. COLE, BRUCE J. Trends in science and conflict coverage in four metropolitan newspapers. *Journalism Quarterly*, Autumn 1975, *52*, 465-471. (III-2)

    Analyzes content of all science news stories (1,074) in 252 editions of 4 major dailies published in 1951, 1961, and 1971. Hypothesizes that reporting of conflict is more frequent today when science is more diverse than formerly and that staff writers mention conflict more frequently than science writers.

101. COLEMAN, E. B. The optimum list and reading for meaning. *Theory Into Practice*, June 1975, *14*, 195-207. (IV-9)

Suggests a methodology to generate short, idiomatic, easily read sentences for adapting to cartoon presented stories. Presents word lists and their judged ratings of frequency with which they could make up 1- and 2-word sentences.

102. COLEMAN, JAMES S. Methods and results in the IEA studies of effects of school on learning. *Review of Educational Research*, Summer 1975, *45*, 355-386. (I)

Focuses on the effects of school on learning in a critical analysis of studies of reading, literature, and science achievement by children in 15 countries.

103. CONCANNON, S. JOSEPHINA. Illustrations in books for children: review of research. *The Reading Teacher*, December 1975, *29*, 254-256. (I)

Summarizes findings from studies comparing the effect on comprehension of texts using many illustrations and those devoid of pictures.

104. CONWAY, M. MARGARET; STEVENS, A. JAY; & SMITH, ROBERT G. The relation between media use and children's civic awareness. *Journalism Quarterly*, Autumn 1975, *52*, 531-538. (III-1)

Assesses 284 fourth, fifth, and sixth graders' political knowledge, party preferences, perceptions of government branches, and party activity by frequency and type of television, radio, and newspaper use. Child and parent levels of interest reported by the children were controlled.

105. COOMBER, JAMES E. Perceiving the structure of written materials. *Research in the Teaching of English*, Winter 1975, *9*, 263-266. (IV-10)

Employs an open book multiple choice test format to assess 242 first year college students' ability to identify the main idea in passages containing topic sentences. Subjects were randomly selected from entering students and divided into good, average, and below average readers according to their scores on a standardized reading achievement test.

106. COPPLE, CAROL E. Effects of three variables on the performance of middle-class and lower-class children in discriminating similar letters in words. *The Journal of Educational Research*, February 1975, *68*, 226-229. (IV-6)

Compares pretests and post tests of trigram matching by 90 four year olds, including 10 controls, to assess the effectiveness of letter discrimination training using or not using overlays, under successive versus simultaneous presentation, on letters varying in the number of differing distinctive features.

107. CORLEY, GEORGIA B., & LEWIS, CHARLES W. The impact of individualized instruction on low achieving youth. *Urban Education*, October 1975, *10*, 321-326. (V-6)

Compares academic achievement gains from pretest to post test following 4 months of individualized instruction in an open classroom atmosphere with expected gains and with gains from post test to follow-up 9 months later. Subjects were 30 inner-city seventh graders.

108. COUNCIL ON INTERRACIAL BOOKS FOR CHILDREN. How children's books distort the Asian American image. *Interracial Books for Children Bulletin*, 1976, New York: Author, *7 (2 & 3)*, 3-23. (III-2)

Reviews and analyzes 66 children's books published since 1945 containing 1 or more Asian American central characters. Summarizes findings of the 11 reviewers.

109. COUNCIL ON INTERRACIAL BOOKS FOR CHILDREN. *Picture books for young children*. New York: Author, 1975, *6 (5 & 6)*, 9-11. (I)

Annotates 48 books on minority and feminist themes for preschool and slightly older children. The books fall into 6 categories: African American/African, Asian American/Asian, Chicano, Native American, Puerto Rican and Sex Role themes.

110. COUNCIL ON INTERRACIAL BOOKS FOR CHILDREN. Textbook battle in Mississippi, part II. *Interracial Books for Children Bulletin*, 1976, New York: Author, *7, (1)*, 7-9. (III-2)

Reports portions of critiques of 2 high school history textbooks, one of which was approved and the other not approved for adoption in Mississippi schools.

111. COUNTS, TILDEN M., JR. The influence of message and source on selection of statements by reporters. *Journalism Quarterly*, Autumn 1975, *52*, 443-449. (III-11)

Investigates the effect of source credibility and agreement or disagreement with student reporter's point of view on the number and accuracy with which they reported on factual and judgmental statements contained in experimenter-written speeches. Analyzes the content of 50 subjects' stories based on these tape recorded speeches.

112. CRAIN, ROBERT L., & YORK, ROBERT L. Evaluating a successful program: experimental method and academic bias. *Universi-*

ty of Chicago School Review, February 1976, *84*, 233-254. (V-11)

Matches 50 high school and 100 elementary school pairs for random assignment to receive federal funds. Compares programs and academic achievement in the experimental and control schools. Uses multiple regression to assess the effect of programs, funded or not, on achievement.

113. CRANBERG, GILBERT. Mail survey respondents and non-respondents. *Journalism Quarterly*, Autumn 1975, *52*, 542-543. (III-15)

Compares newspaper survey results after the initial mailing, second mailing, and final telephone call. Cumulative return rates were 63 per cent, 82 per cent, and 95 per cent.

114. CRIPWELL, KENNETH R. Governmental writers and African readers in Rhodesia. *Language in Society*, August 1975, *4*, 147-154. (III-6)

Compares the simplified documents written by the British and Rhodesian governments to explain the settlement proposals to Africans in terms of syntactic complexity and lexical choice with respect to the audience to which they are addressed.

115. CUNNINGHAM, PATRICIA M. An inquiry into teachers' attitudes toward black-dialect-specific and non-dialect-specific reading miscues. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 162-168. (II)

Examines the relationship between type of non-meaning changing miscues teachers report they would correct on a 20-item questionnaire and their recognition of black dialect. Subjects were 70 graduate students taking reading courses.

116. CURRIE, BRUCE F. The emergence of a specialized newspaper: *The Chronicle of Higher Education* from 1966 to date. *Journalism Quarterly*, Summer 1975, *52*, 321-325. (III-8)

Describes the development of a paid subscription publication for college administrators in relation to financial support, policy, content, marketing, and reader perceptions indicated by a mail survey of 2,406 subscribers.

117. DANESI, MARCEL. A critical survey of elementary and intermediate Italian textbooks, 1966-1975. *Modern Language Journal*, March 1976, *55*, 119-122. (III-2)

Describes and evaluates the 7 texts for teaching Italian that have been published in North America since 1966. The criteria were the utilization of a preface and/or introduction; the format, contents, and methodology employed in the lesson; the use of supplementary materials; and the presentation of cultural materials.

118. DANGERFIELD, LINDA A.; MCCARTNEY, HUNTER P.; & STARCHER, ANN T. How did mass communication, as sentry, perform in the gasoline "crunch"? *Journalism Quarterly*, Summer 1975, *52*, 316-320. (III-2)

Analyzes content of material from oil organizations, 3 national news magazines, and congressional and other governmental statements on the energy crisis during 1971-1973.

119. D'ARCY, PAT. *Reading for meaning:* Vol. 1, Learning to read. London: Hutchinson Educational, 1973. (I)

Discusses recent research and experiments in the teaching of reading and the responses of children from preschool to the end of the first stages of reading acquisition.

120. DAS, J. P., & MOLLOY, G. N. Varieties of simultaneous and successive processing in children. *Journal of Educational Psychology*, April 1975, *67*, 213-220. (IV-3)

Uses factor analysis of 10 tests including reading achievement and readiness, picture analogies, visual and auditory memory, and spatial relations to study patterns of cognitive abilities. Subjects were 60 first and 60 fourth grade boys of dull to normal IQ.

121. DAVIS, JAMES R. The new students: what they read. *College and Research Libraries*, May 1975, *36*, 216-221. (I)

Interprets readers' interests, concerns, and goals from analyzing best sellers in various college bookstores reported in 1970, 1971, and 1972 surveys.

122. DELLA BITTA, ALBERT J.; JOHNSON, EUGENE M.; & LOUDON, DAVID L. Researching the value and use of an agency's educational publications. *Journalism Quarterly*, Summer 1975, *52*, 326-332. (III-14)

Surveys knowledge of, interest in, and benefits from reading any of 20 representative New England Marine Resources Information Program publications requested by a representative sample of 900 persons. There were 409 usable questionnaires.

123. DENBOW, CARL JON. Listenability and readability: an experimental investigation. *Journalism Quarterly*, Summer 1975, *52*, 285-290. (IV-19)

Uses pre-treatment and post treatment cloze procedures to investigate comprehension of written versus spoken texts at 2 readability levels. Subjects were 140 speech or journalism students randomly assigned to reading, listening, or control groups.

124. DENBOW, CARL JON. A test of predictors of newspaper subscribing. *Journalism Quarterly*, Winter 1975, *52*, 744-748. (III-7)

Validates indices predicting newspaper readership against a random sample of 355 telephone subscribers in Murray, Kentucky, excluding university numbers. Variables included breadwinner's age, occupation, education, and length of residence.

125. DENNIS, EVERETTE E., & SADOFF, MICHAL. Media coverage of children and childhood: calculated indifference or neglect? *Journalism Quarterly*, Spring 1976, *53*, 47-53. (I)

Synthesizes historical material on past coverage of children, attitudes toward children, and communication research in an examination of the nature and extent of media coverage of children.

126. DEROCHE, EDWARD F. Teaching reading with newspapers: a review of selected studies and reports. *The Minnesota Reading Quarterly*, October 1975, *20*, 6-8, 44. (I)

Presents pre-program and post program reading achievement results of 7 briefly described reports of using newspapers and magazines to teach reading. The students were in fourth grade through high school.

127. DESSAUER, JOHN P. *Book publishing: What it is, what it does.* New York: R. R. Bowker, 1974. (III-9)

Reviews the history and environment of book publishing. Investigates the qualifications of practitioners and the products and processes of manufacture and marketing. Inquires into the patterns of ownership and styles of management and into the economics and finance of the process.

128. DEWEESE, L. CARROLL, III. Computer content analysis of printed media: a limited feasibility study. *Public Opinion Quarterly*, Spring 1976, *40*, 92-100. (III-3)

Estimates cost of different methods of converting newsprint to computer-readable form for content analysis using a computer-based dictionary. Applies 1 method to editorials in 3 newspapers sampled from 1960-1972.

129. D'HEURLE, ADMA; FEIMER, JOEL N.; & KRAETZER, MARY C. World view of folktales: a comparative study. *The Elementary School Journal*, November 1975, *76*, 75-89. (III-2)

Analyzes folk tales from Africa, Japan, Norway, and by Grimm. Compares frequencies of types of characters, affect, outcome, aggressive behavior, and cultural values expressed.

130. DIAZ-GUERRERO, ROGELIO; REYES-LAGUNES, ISABEL; WITZKI, DONALD B.; & HOLTZMAN, WAYNE H. Sesame Street around the world: Plaza Sesámo in Mexico: an evaluation. *Journal of Communication*, Spring 1976, *26*, 145-154. (V-4)

Recounts earlier experiment comparing viewers and nonviewers of the Spanish version of Sesame Street. Examines results of a new field study in Mexico, comparing 4- and 5-year-old viewers on 16 tests. Sample includes urban lower-class, blue-collar and rural economically deprived.

131. DICKERSON, WAYNE B. Decomposition of orthographic word classes. *Linguistics: an international review*, November 1, 1975, 19-34. (I)

Summarizes recent research on 5 "exceptional" spelling patterns demonstrating how they help the reader predict pronunciation.

132. DIETERICH, DANIEL J. Annotated bibliography of research in the teaching of English: July 1, 1975 to December 31, 1975. *Research in the Teaching of English*, Spring 1976, *10*, 83-98. (I)

Annotates 107 studies in 6 areas: bilingual and bidialectical; language and verbal learning; literature humanities, and media; teacher education; testing and evaluation; and written and oral communication.

133. DILL, JOHN R.; BRADFORD, CORINE; & GROSSETT, MARJORIE. Comparative indices of school achievement by black children from different preschool programs. *Psychological Reports*, December 1975, *37*, 871-877. (IV-16)

Analyzes the relationship of developmental day care, custodial day care, Head Start, and no preschool program to demographic-family variables, attendance, personal-social behavior ratings, and reading achievement. Data were collected on 728 urban children during first, second, and third grades.

134. DIMITRIJEVIC, N., & GUNTON, D. A survey of the reading habits and interests of learners of English in Belgrade. *English Language Teaching Journal*, October 1975, *30*, 36-45. (III-4)

Describes the reading patterns of 348 university and secondary school students. Questions the location of reading and time spent on English language publications.

135. Donohue, G. A.; Tichenor, P. J.; & Olien, C. N. Mass media and the knowledge gap. *Communication Research*, January 1975, *2*, 3-22. (III-14)

Explores 4 social system variables that may affect either the existence of knowledge gaps, or their magnitude, in the community setting. Most findings are from personal interviews in 16 Minnesota towns since 1969.

136. Dore-Boyce, Kathleen; Misner, Marilyn S.; & McGuire, Lorraine D. Comparing reading expectancy formulas. *The Reading Teacher*, October 1975, *29*, 8-14. (IV-3)

Compares 4 predictors of observed reading achievement, taking account of sex, grades repeated, and levels of IQ and MA. Subjects were 375 fourth and 358 fifth graders.

137. Downing, John. An application of the comparative method to a practical educational problem: literacy learning. *School Review*, May 1975, *83*, 449-459. (III-6)

Analyzes reports on literacy learning solicited from specialists in 14 countries.

138. Downing, John. The child's concepts of language. In William Latham (Ed.) The road to effective reading. *Tenth annual study conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 27-33. (I)

Summarizes findings in studies of children's ability to articulate linguistic concepts used in the teaching of reading.

139. Downing, John. Comparative reading: state of the art. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 70-77. (I)

Surveys selected cross-national research on reading achievement, content of reading materials, and cultural and linguistic variables influencing reading acquisition.

140. Drader, Darla L. The role of verbal labeling in equivalence tasks as related to reading ability. *Journal of Learning Disabilities*, March 1975, *8*, 175-179. (IV-4)

Tests for modality preferences among 12 good and 12 poor readers' descriptions of temporally ordered visual, auditory, and tactual patterns, using analysis of covariance to control for IQ differences. Subjects were 11 and 12 year old middleclass boys.

141. Drummond, Robert J.; Smith, R. Kent; & Pinette, Clayton A. Internal-external control construct and performance in an individualized community college reading course. *Reading Improvement*, Spring 1975, *12*, 34-38. (IV-15)

Investigates the relationship of locus of control and reading achievement before and after a reading improvement course. Subjects were 30 male freshmen.

142. DUFFY, ROBERT J., & ULRICH, SANDRA REIMER. A comparison of impairments in verbal comprehension, speech, reading, and writing in adult aphasics. *Journal of Speech and Hearing Disorders*, February 1976, *41*, 110-119. (VI)

Investigates differences between, severity of impairment among, and individual differences between language modalities in 44 aphasics. Subjects were rehabilitation patients whose verbal comprehension, speech, reading, and writing were independently rated by 2 of 4 speech pathologists.

143. DULIN, KENNETH L., & CHESTER, ROBERT D. Plausibility-judgments of pro and con arguments as an indirect measure of eleventh-graders' attitudes toward books and reading. In Phil L. Nacke (Ed.) Interaction: research and practice for college-adult reading. *Twenty-third Yearbook of the National Reading Conference*, 1974. Pp. 214-218. (IV-18)

Compares teacher judgments and self-ratings of attitudes toward reading with subjects' Likert-type scale ratings of effectiveness of arguments for and against reading. Subjects were 130 white, middleclass students.

144. DULIN, KEN L., & GREENEWALD, M. JANE. Mature readers' affective response to 3 specific propaganda devices: loaded words, name-calling, and borrowed prestige/borrowed dislike. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 267-272. (IV-10)

Compares semantic differential ratings of characters described in 2 versions of 10 human interest stories, 1 negative and 1 positive. Subjects were junior high school and high school students and adults.

145. DUSEK, JEROME B. Do teachers bias children's learning? *Review of Educational Research*, Fall 1975, *45*, 661-684. (I)

Reviews the literature on the effects of teacher expectancies on IQ and academic achievement.

146. EAGAN, SR. RUTH. An investigation into the relationship of the pausing phenomena in oral reading and reading comprehension. *The Alberta Journal of Educational Research*, December 1975, *21*, 278-288. (IV-11)

Investigates relationships among pauses (number, length, and placement) during oral reading, reading ability, and comprehension of texts read aloud and silently. Subjects were 72 second and third graders randomly selected from the top, middle, and bottom reading achievement ranges.

147. EARLY, MARGARET. Important research in reading and writing. *Phi Delta Kappan*, January 1976, *57*, 298-301. (I)

Discusses implications of selected research and opinion on methods of teaching reading, national reading standards, reading skills, reading diagnosis, and language acquisition.

148. EBERWEIN, LOWELL. Does pronouncing unknown words really help? *Academic Therapy*, Fall 1975, *11*, 23-29. (IV-11)

Assesses retention of teacher aid during oral reading through cloze tests on the same texts administered 45 minutes later. Subjects were 41 fourth graders.

149. EDFELDT, AKE W. Concerning differences between good and poor readers. *Journal of Experimental Education*, Spring 1975, *43*, 90-93. (I)

Reviews and synthesizes selected studies of good versus poor readers, focusing on processes during eye saccades.

150. EDGINGTON, RUTH E. SLD children: a ten-year follow-up. *Academic Therapy*, Fall 1975, *11*, 53-64. (V-11)

Reports educational history and current status on 25 of the original 47 pupils who had participated in a resource room program 10 years earlier.

151. EDWARDS, JUDITH; NORTON, SHIRLEY; TAYLOR, SANDRA; WEISS, MARTHA; & DUSSELDORP, RALPH. How effective is CAI? A review of the research. *Research in Review*, November 1975, *33*, 147-153. (I)

Summarizes results of 33 studies comparing effectiveness of computer-assisted instruction with traditional and other non-traditional instructional methods in reading and other academic areas.

152. EDWARDS, V. K. Effects of dialect on the comprehension of West Indian children. *Educational Research*, February 1976, *18*, 83-95. (IV-8)

Discusses the differences in comprehension scores for 40 West Indian and 40 British children from ages 11 years 3 months to 12 years 6 months who were balanced in age, social class, and oral reading ability.

153. EGELAND, BYRON. Effects of errorless training on teaching children to discriminate letters of the alphabet. *Journal of Applied Psychology*, August 1975, *60*, 533-536. (IV-6)

Uses immediate and 1-week delayed post tests to compare letter discrimination of 108 preschoolers taught by errorless training with distinctive features or irrelevant cues highlighted and traditional reinforcement-extinction procedures.

154. EKWALL, ELDON, E. Informal reading inventories: the instructional level. *The Reading Teacher*, April 1976, *29*, 662-665. (I)

Examines definitions of independent, instructional, and frustration levels of reading comprehension and word recognition. Reviews findings from 2 related studies.

155. ELLEY, W. B.; BARHAM, I. H.; LAMB, H.; & WYLLIE, M. The role of grammar in a secondary school English curriculum. *Research in the Teaching of English*, Spring 1976, *10*, 5-21. (V-7)

Analyzes the effects on language outcome measures, including reading comprehension and attitudes, of traditional versus transformational grammar taught to 248 high school students in 8 matched classes for 3 years. The 3 teachers taught each of the 3 programs at different times.

156. ENGEL, G. R. The functional relationship between word identification and letter probability. *Canadian Journal of Psychology*, September 1974, *28*, 300-309. (IV-9)

Uses 4-letter words of high and low probability of occurrence presented tachistoscopically to 40 adults to study word recognition as a function of individual letter predictability.

157. ERICKSON, MARILYN T. The Z-score discrepancy method for identifying reading disabled children. *Journal of Learning Disabilities*, May 1975, *8*, 308-312. (IV-14)

Compares results of identifying children with reading problems using a reading expectancy formula versus a deviation score method. Subjects were 79 urban and 99 rural third graders.

158. ESTES, THOMAS H., & JOHNSTONE, JULIE P. Assessing attitudes toward reading: a validation study. In Phil L. Nacke (Ed.) Interaction: research and practice for college-adult reading. *Twenty-third Yearbook of the National Reading Conference*, 1974. Pp. 219-223. (V-12)

Uses a multi-trait (8 "traits")-multi-method (4 measures) design to validate a widely used measure of attitudes toward reading. Data were collected from 641 seventh through twelfth graders.

159. ESTES, W. K. The locus of inferential and perceptual processes in letter identification. *Journal of Experimental Psychology: General*, June 1975, *104*, 122-145. (IV-6)

Uses paid young adults in 2 sets of investigations of the effect of word versus non-word context on the detection of tachistoscopically displayed letters. Presents target letter before or simultaneously with the array to be searched, in isolation or in the context of words, non-words, or noise and various stimulus offset systematically.

160. ETAUGH, CLAIRE, & MICHALS, DAVID. Effects on reading comprehension of preferred music and frequency of studying to music. *Perceptual and Motor Skills*, October 1975, *41*, 553-554. (V-8)

Analyzes test scores of 16 male and 16 female undergraduates under conditions of testing in quiet surroundings and while subjects' own record album was playing. Examines sex differences in average scores in relation to reported frequency of studying to music.

161. EVANS, DAVID R.; HORVATH, PETER; SANDERS, SIDNEY; & DOLAN, JAMES. Reinforcement of attention and academic performance in a special education class. *Psychological Reports*, December 1974, *35*, 1,143-1,146. (IV-5)

Assesses academic achievement gains following experimental treatment using "privileges" (*i.e.*, duties such as answering the door) earned contingent upon attending to teacher and/or assignment. Subjects were 14 children, mean age 8-8.

162. EVANS, HOWARD M., & TOWNER, JOHN C. Sustained silent reading: Does it increase skills? *The Reading Teacher*, November 1975, *29*, 155-156. (V-6)

Compares reading achievement over 10 weeks using 20 minutes of sustained silent reading versus 20 minutes of using materials for practicing skills taught subsequent to daily reading instruction. Subjects were 48 fourth graders randomly assigned to one or the other groups.

163. EVANS, MARTHA C. Children's ability to segment sentences into individual words In George H. McNich & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 177-180. (IV-8)

Assesses 45 kindergarteners' and 45 first graders' ability to name the first, second, etc. word in spoken sentences in September and again in December. Analyzes the relationship of first graders' word identification ability to reading readiness and reading achievement tested in September and December respectively.

164. EVANS, ROSS A., & BILSKY, LINDA HICKSON. Effects of letter-reversals training on the discrimination performance of EMR children. *American Journal of Mental Deficiency*, July 1975, *80*, 99-108. (VI)

Compares differentiation of *b* and *d* by children given tasks requiring discrimination among similar, dissimilar, or no-letter stimuli. Subjects were 6 to 13 years old, with IQ's 50-75, who had demonstrated letter reversals but no other obvious problems.

165. FAIRBANKS, MARILYN M. Relationship between research control and reported results of college reading improvement programs. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 80-93. (I)

Evaluates 87 studies of college student reading and study skills programs that used overall grade point average as dependent variable according to basic methodological criteria.

166. FARNHAM-DIGGORY, S., & GREGG, LEE W. Short-term memory function in young readers. *Journal of Experimental Child Psychology*, April 1975, *19*, 279-298. (IV-4)

Compares 12 good and 12 poor grade 5 readers on tests of memory span and scanning presented both orally and visually. Relates oral reading errors to letter patterns concept assessed by subjects' constructions of patterns from 4 minimally confusing letters.

167. FARRELL, THOMAS J. Reading in the community college. *College English*, September 1975, *37*, 40-46. (I)

Discusses the relationship of psycholinguistic studies of reading to correlational studies of gradepoint average and reading achievement and to outcome studies of different types of college reading programs.

168. FEELEY, JOAN T. Television and reading in the seventies. *Language Arts* (formerly *Elementary English*), September 1975, *52*, 797-801, 815. (I)

Reviews several studies of the effectiveness of commercial and public television programs as instructional and motivational devices to teach and stimulate interest in reading.

169. FENWICK, GEOFFREY. On comics—an annotated reading list. *The Use of English*, Autumn 1975, *27*, 18-19. (I)

Provides annotations on 16 publications dealing with research and opinions about comics.

170. **Ferguson, Neil.** Fictographs and prereading skills. *Child Development*, September 1975, *46*, 786-789. (V-12)

Describes a learning task (picture reading) and compares its reading predictive validity with that of other developmental tests. Subjects were 100 children tested at the beginning of their first and second years in infant school.

171. **Fesler, Elizabeth; Guidubaldi, John; & Kehle, Thomas J.** Effects of follow through model: Primary Education Project—Individually Prescribed Instruction (PEP-IPI) on children's academic competence. *Psychology in the Schools*, April 1976, *13*, 181-184. (V-4)

Uses a longitudinal design within cohort and cross-sectional design across cohorts to assess the effectiveness of a 4-year individualized program. There were 253 experimental and 61 control subjects entering kindergarten in 1969-1972; they were tested yearly thereafter on appropriate readiness and academic achievement measures.

172. **Fett, John H.** Situational factors and peasants' search for market information. *Journalism Quarterly*, Autumn 1975, *52*, 429-435. (III-4)

Interviews a random sample of 111 farmers who subscribed to the local bi-weekly newspaper regarding their information seeking and marketing behavior in connection with their largest income producing products.

173. **Filion, F. L.** Estimating bias due to nonresponse in mail surveys. *Public Opinion Quarterly*, Winter 1975/76, *39*, 482-492. (III-15)

Employs a linear regression model for estimating population parameter values while correcting for non-response using cumulated responses over 3 successive mailings of a waterfowl harvest questionnaire. Subjects were a stratified sample of 3,360 Canada migratory game bird hunting permit purchasers in Ontario.

174. **Filp, Johanna.** Relationship among reading subskills: a hierarchical hypothesis. *Journal of Reading Behavior*, Fall 1975, *7*, 229-240. (IV-9)

Analyzes previously reported correlation matrices of subtests from 38 good and poor readers, half 7 and half 9 years old, to test a hypothesis ordering phonics skills from simple to complex.

175. **Fine, Gary Alan.** Recall of information about diffusion of major news event. *Journalism Quarterly*, Winter 1975, *52*, 751-755. (III-1)

Investigates sources of information about Spiro Agnew's resignation and *nole contendere* plea to criminal charges from 160 questionnaires distributed to Harvard University undergraduates, half 2 days after broadcast of the news and a half 2 weeks later. Sources included interpersonal communication and mass media.

176. FIRESTONE, GLENN, & BRODY, NATHAN. Longitudinal investigation of teacher-student interactions and their relationship to academic performance. *Journal of Educational Psychology*, August 1975, *67*, 544-550. (IV-13)

Uses multiple regression to assess the effect of observed teacher-child behavior and IQ to reading achievement. Subjects were 79 black and Hispanic 5 and 6 year olds and 6 teachers.

177. FISHER, DENNIS F. Reading and visual search. *Memory & Cognition*, March 1975, *3*, 188-196. (IV-13)

Describes 4 experiments comparing the ways in which reading and search are affected by manipulations of word shape and word boundary. A total of 177 undergraduates participated.

178. FISHER, DENNIS F., & LEFTON, LESTER A. Peripheral information extraction: a developmental examination of reading processes. *Journal of Experimental Child Psychology*, February 1976, *21*, 77-93. (IV-13)

Compares children's and adults' speed of reading, searching for specified targets, and same/different judgments of letter pairs in 3 experiments. Type, word boundaries, and letter locations were varied. Subjects were 72 introductory psychology students and 216 third, fourth, and sixth graders for the first 2 experiments. Adults and 15 children from grades 2, 3, and 5 were subjects for Experiment 3.

179. FISHMAN, ANNE STEVENS. A criticism of sexism in elementary readers. *The Reading Teacher*, February 1976, *29*, 443-446. (I)

Summarizes several surveys of basal readers analyzing presentations of males and females.

180. FORESTER, ANNE D. Learning the language of reading—an exploratory study. *The Alberta Journal of Educational Research*, March 1975, *21*, 56-62. (IV-11)

Analyzes classroom observations of child/teacher interaction and tape recorded oral reading by 1 good, 1 average, and 1 poor reader, to study reading acquisition. Observations were made on 8 kindergartners during 3 sessions and on 20 first graders during 7 sessions of 1½ hour each.

181. FORNESS, STEVEN R.; GUTHRIE, DONALD; & HALL, ROBERT J. Follow-up of high-risk children identified in kindergarten

through direct classroom observation. *Psychology in the Schools*, January 1976, *13*, 45-49. (IV-14)

Validates time-sampled behavior ratings of verbal, attending, disruptive, and teacher/peer responsive behavior made on 94 kindergarteners against teacher ratings and academic achievement scores obtained on 61 of the children who remained in that school at the end of the first grade.

182. FOSTER, GLEN G.; SCHMIDT, CARL R.; & SABATINO, DAVID. Teacher expectancies and the label "learning disabilities." *Journal of Learning Disabilities*, February 1976, 9, 111-114. (II)

Uses a videotape of a normal child taking diagnostic tests in an experiment assessing the effects of labeling. Of the 44 teachers who rated the child's observed and potential problems, half were told he was normal and half that he was learning disabled.

183. FOURNIER, PATRICIA A.; MAZZARELLA, MADELINE M.; RICCIARDI, MORENA M.; & FINGERET, ALLAN L. Reading level and locus of interference in the Stroop color-word task. *Perceptual and Motor Skills*, August 1975, *41*, 239-242. (IV-5)

Studies color-word interference as a function of reading level. Subjects were 20 third and fourth graders, half of whom were good and half of whom were poor readers according to teacher identification and reading achievement scores.

184. FOX, BARBARA, & ROUTH, DONALD K. Phonemic analysis and synthesis as word-attack skills. *Journal of Educational Psychology*, February 1976, *68*, 70-74. (IV-9)

Compares effects of phonic blend training on decoding words in children proficient at segmenting syllables into individual phonemes (N-20). Subjects were upper-middleclass 4 year olds.

185. FOX, SHARON E. Assisting children's language development. *The Reading Teacher*, April 1976, *29*, 666-670. (I)

Relates findings from selected studies on language development to implications for teachers. Discusses research on the relationship of oral language and reading.

186. FRANK, JAN, & LEVINSON, HAROLD N. Dysmetric dyslexia and dyspraxia. *Academic Therapy*, Winter 1975/76, *11*, 133-143. (IV-1)

Attempts to differentiate specific, primary, and developmental dyslexia from dyslexia involving cerebellar-vistibular signs exhibited on neuropsychiatric examinations of over 1,000 children.

187. FRASE, LAWRENCE T., & SCHWARTZ, BARRY J. Effect of question production and answering on prose recall. *Journal of Educational Psychology*, October 1975, *67*, 628-635. (IV-5)

Reports 2 experiments on studying, using paid subjects—48 senior high school and 64 college students. Varies instructions on how to construct and answer questions and on type of question to construct; one group of subjects were merely told to study.

188. FRIEDMAN, MONROE PETER, & WILSON, R. WARD. Application of unobtrusive measures to the study of textbook usage by college students. *Journal of Applied Psychology*, October 1975, *60*, 659-662. (IV-5)

Uses strategically placed glue seals in introductory psychology textbooks and assesses underlining to investigate how 137 students used their books. Analyzes usage patterns by sex (71 females) and type of exam (essay or multiple choice).

189. FRONK, ROBERT H. The effect of student reading level, type of instructional material, and mode of instruction on time required to reach mastery-level learning. *Science Education*, October/December 1975, *59*, 487-491. (IV-4)

Investigates criterion learning as a function of reading achievement, listening versus reading, and task (manipulative application of instructions versus non-manipulation). Subjects were 48 undergraduates divided into high, average, and low reading groups.

190. FRYMIER, JACK R.; HENNING, MARY JO; HENNING, WILLIAM, JR.; NORRIS, LINDA; & WEST, SARA C. A longitudinal study of academic motivation. *The Journal of Educational Research*, October 1975, *69*, 63-66. (IV-13)

Investigates relationships of a test of motivation to seventh and twelfth grade IQ, reading and mathematics achievement, high school graduation, college enrollment, and grade point average. Follow-up data were available on 591 of the original sample of 853 students.

191. GARDNER, HOWARD, & ZURIF, EDGAR. *Bee* but not *be*: oral reading of single words in aphasia and alexia. *Neuropsychologia*, April 1975, *13*, 181-190. (VI)

Investigates cognitive mechanisms mediating reading in 3 studies comparing reading and naming ability of 38 hospitalized patients diagnosed as aphasic, alexic, and alexic with severe agraphia. Stimuli were 84 words of varying levels of abstraction.

192. Geiselman, Ralph E., & Riehle, Jonathan P. The fate of to-be-forgotten sentences in semantic positive forgetting. *Bulletin of the Psychonomic Society*, 1975, *6*, (*1*), 19-21. (IV-5)

Uses logically ordered and scrambled sentences on 2 themes to test effect of sentence organization on incidental and directed free recall; 48 psychology undergraduates were randomly assigned to remember the information about one theme but tested on both.

193. Gentile, Lance M. Effect of tutor sex on learning to read. *The Reading Teacher*, May 1975, *28*, 726-730. (V-5)

Analyzes interactions between pretutoring and post tutoring reading achievement scores and tutor sex, tutor ethnicity (Anglo or Mexican-American) and pupil grade (second, third, or fourth). Subjects were 60 Mexican-American boys and 20 tutors.

194. Gentile, Lance M., & McMillan, Merna M. When Johnny can't read but Mary can, men can help. *The Reading Teacher*, May 1976, *29*, 771-775. (I)

Summarizes findings from several studies of differences between male and female teachers in the classroom and in general.

195. Gentry, W. Doyle. Aggression in fairy tales: comparison of three cultures. *Psychological Reports*, December 1975, *37*, 895-898. (III-2)

Estimates the extent of aggressive content in 6 fairy tales utilized in American, Japanese, and Middle Eastern Indian cultures.

196. Gibson, Eleanor J. Trends in perceptual development: implications for the reading process. In Anne D. Pick (Ed.) *Minnesota Symposia on Child Psychology, Volume 8.* Minneapolis: The University of Minnesota Press, 1974. Pp. 24-54. (I)

Discusses the relationship of programmatic research findings to 3 trends in perceptual development: 1) increasing specificity of correspondence between information in stimulation and the differentiation of perception, 2) increasing optimization of attention, 3) increasing economy in the perceptual process of information pickup.

197. Gillard, H. C. Factors affecting the efficient reading of science textbooks—a pilot study. In William Latham (Ed.) The road to effective reading. *Tenth annual study conference of the United Kingdom Reading Association.* London: Ward Lock Educational, 1975. Pp. 130-138. (V-9)

Discusses the relationship of cloze scores for biology, chemistry, physics, and English textbooks and pupil-reported unknown words in science textbooks to reading subskills, factors determining textbook selection, and teaching methods research. Subjects were 90 first and 56 fourth year students.

198. Gillespie, Patricia H.; Miller, Ted L.; & Fielder, Virginia Dodge. Legislative definitions of learning disabilities: roadblocks to effective service. *Journal of Learning Disabilities*, December 1975, *8*, 660-666. (V-1)

Uses questionnaires sent to all 50 state departments of education (60 per cent return rate) to determine the kinds of variability among the states in their procedures for identifying, assessing, and placing of learning disabled children.

199. Goldenberg, Edie N. *Making the papers*. London: D. C. Heath, 1975. (III-7)

Investigates the efforts of "have-not" groups to gain access to newspapers through field studies of 4 urban poor groups in Boston and interviews with news people in Boston during 1971-1972.

200. Golub, Lester S. Literacy in developing countries. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 117-122. (I)

Focuses on illiteracy rates in a summary of findings from 18 publications on literacy programs.

201. Goodacre, Elizabeth. British research and beginning reading. In William Latham (Ed.) The road to effective reading. *Tenth annual study conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 55-62. (I)

Discusses who does research where and the extent, scope, funding, and priorities of research.

202. Goodacre, Elizabeth J. Reading research in Britain—1975. *Reading*, March 1976, *10*, 4-10. (I)

Summarizes research findings on studies of reading standards and tests, dyslexia and specific reading retardation, remedial and reading provision, reading development, and materials and reading interests.

203. Goodacre, Elizabeth J. *Reading Research 1974*. Reading, Berks, RG1 5RU: University of Reading, School of Education, 1975. (I)

Surveys research available between January through December, 1974, including tests, specific reading of difficulties, remediation and language. Annotates 65 relevant articles and books.

204. Goodacre, Elizabeth J. Recent studies of reading standards in the United Kingdom. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 494-499. (I)

Discusses problems in surveys of reading standards in England, Wales, Scotland, and Northern Ireland, including type and varieties of tests used, possible sample bias, exterpolating findings from one age group to another, and varying criteria of reading backwardness. Presents some findings from recent surveys.

205. GOODMAN, KENNETH S. Influences of the visual peripheral field in reading. *Research in the Teaching of English*, Fall 1975, *9* (*2*), 210-222. (IV-11)

Searches near and far range of the visual peripheral field for graphic matches with oral miscues. Students at different proficiency levels in each of second, fourth, sixth, eighth, and tenth grade read texts at appropriate difficulty levels.

206. GOODSTEIN, H. A., & KAHN, H. Pattern of achievement among children with learning difficulties. *Exceptional Children*, September 1974, *41*, 47-49. (IV-14)

Studies the relationship among measures of chronological age, intelligence, and reading and mathematics achievement for 50 underachieving pupils in grades 4, 5, and 6.

207. GORMLEY, WILLIAM THOMAS, JR. Newspaper agendas and political elites. *Journalism Quarterly*, Summer 1975, *52*, 304-308. (III-14)

Identifies 25 salient state issues by monitoring 5 North Carolina newspapers on days the General Assembly met. Compares newspaper emphases with ranking of these issues on a scale of importance by 30 State Senators who completed questionnaires (return rate 60 per cent).

208. GRAVES, MICHAEL F., & PATBERG, JUDYTHE P. A tutoring program for adolescents seriously deficient in reading. *Journal of Reading Behavior*, Spring 1976, *8*, 27-35. (V-11)

Presents results of a highly structured non-individualized tutoring project used with 10 seventh and eighth grade students reading between second and fifth grade level. Tutors were college students.

209. GREANEY, VINCENT, & CLARKE, MICHAEL. A longitudinal study of the effects of two reading methods on leisure-time reading habits. In Donald Moyle (Ed.) Reading: what of the future? *Eleventh annual conference of the United Kingdom Reading Association.* London: Ward Lock Educational, 1975. Pp. 107-114. (V-7)

Compares self-reported reading habits and interests of 18-year-old Dublin men who, 6 years earlier, had been randomly assigned to 8-month programs of individualized (N = 36) or basal reader (N = 38) instruction. Of the original group, 66 returned questionnaires.

210. Green, Robert T.; Cunningham, William H.; & Cunningham, Isabella C. M. The effectiveness of standardized global advertising. *Journal of Advertising*, Summer 1975, *4*, 25-30. (III-14)

Tests the extent to which foreign consumers and US consumers use the same criteria to evaluate 2 consumer products. Sample included in this cross-cultural research included college students from the United States, France, India, and Brazil. Includes a critique and a rejoinder at the conclusion of the study.

211. Greenspan, Steven B. Effectiveness of therapy for children's reversal confusions. *Academic Therapy*, Winter 1975/76, *11*, 169-178. (IV-6)

Compares post treatment performance on 3 diagnostic tests of 26 children who received perceptual-motor training with 26 children who received orthoptic training. Subjects were drawn from a population of underachieving children already receiving some form of therapy and matched on demographic, academic, and psychological test variables.

212. Grey, Richard. A comparison of reading comprehension skills and accompanying imagery of fifth grade children reading at three independent levels. *The New England Reading Association*, 1975, *11* (*1*), 25-30. (IV-10)

Examines differences in reading comprehension scores by sex, reading level (fourth through sixth), passages (fictional and nonfictional) and number of imagery responses to 10 statements. Subjects were 120 fifth graders given passages comparable to their measured reading levels and asked questions requiring literal recall, inference, evaluation, and appreciation.

213. Griffiths, Anita N. Self-concepts of dyslexic children. *Academic Therapy*, Fall 1975, *11*, 83-90. (IV-15)

Examines self-ratings on a 35-item personality test. Subjects were 99 boys and 32 girls, ages 6 to 14, referred for educational and psychological evaluation.

214. Groff, Patrick. Blending: basic process or beside the point? *Reading World*, March 1976, *15*, 161-166. (I)

Compares authoritative opinion favorable and negative to arriving at word pronunciation from blending latter sounds, along with relevant research findings.

215. GROFF, PATRICK. Do children need to blend words? *Reading*, March 1976, *10*, 26-31. (I)

Discusses research on word blending in relation to assumptions found in methods textbooks.

216. GROFF, PATRICK. The mythology of reading: 1—sight words. *Reading Horizons*, Summer 1975, *15*, 208-211. (I)

Discusses pertinent research regarding teaching words as wholes.

217. GROFF, PATRICK. Research in brief: shapes as cues to word recognition. *Visible Language*, Winter 1975, *9*, 67-71. (I)

Discusses the concept of word shape on contours and reviews related research.

218. GROTTA, GERALD L.; LARKIN, ERNEST F.; & DEPLOIS, BARBARA. How readers perceive and use a small daily newspaper. *Journalism Quarterly*, Winter 1975, *52*, 711-715. (III-4)

Reports interview results from a random sample of 106 subscribers to a 74-year-old newspaper in a town of 6,350 souls.

219. GRUNDIN, HANS. The development of reading, writing and other communication skills during the comprehensive and upper secondary school years: presentation of a Swedish research project. In William Latham (Ed.) The road to effective reading. *Tenth annual study conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 139-147. (III-6)

Uses overlapping tests to compare reading, writing, and spelling achievement of first through twelfth graders. The sample comprised about 210 students from each grade, including some from special classes, totalling more than 2,500.

220. GUIDRY, LOYD, J., & KNIGHT, D. FRANCES. Comparative readability: four formulas and Newbery books. *Journal of Reading*, April 1976, *19*, 552-556. (V-9)

Presents readability estimates on 53 award-winning children's books, using 4 formulas, their readability means, and the mean differences from the readability means.

221. GUILLAUMIN, COLETTE. Changes in inter-ethnic 'attitudes' and the influence of the mass media as shown by research in French-speaking countries. In *Race as news*. Paris: Unesco, 1974. Pp. 55-87. (I)

Discusses the connections and contrasts between the concepts of attitude change and influence and the actual research. Compares French-language research with the concepts of English-speaking sociologists.

222. GUNDERSON, DORIS V. Sex differences in language and reading. *Language Arts*, March 1976, *53*, 300-306. (I)

Summarizes research findings on sex role stereotyping in children's books and language development, school behavior, and reading difficulty of boys and girls.

223. HAASE, ANN MARIE BERNAZZA. Interest as a variable in word acquisition: a brief report. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 291-294. (IV-5)

Investigates the effect on serial learning of presenting pleasant, neutral, or negative sounding words visually or aurally. Subjects included 30 average readers in fifth grade and 15 paid college students who were randomly assigned to treatment conditions.

224. HACHTEN, WILLIAM A. Ghana's press under the N.R.C.: an authoritarian model for Africa. *Journalism Quarterly*, Autumn 1975, *52*, 458-464, 538. (III-12)

Analyzes the pattern of mass communication in Ghana, the manifest and latent functions of the press, what the press fails to do, and what the press could do under the National Redemption Council.

225. HAIN, PAUL L. How an endorsement affected a non-partisan mayoral vote. *Journalism Quarterly*, Summer 1975, *52*, 337-340. (III-14)

Uses pre- and post election telephone interviews of a stratified random sample of 409 Albuquerque residents drawn from voting lists to assess the effect of newspaper editorial endorsements of a mayoral candidate on vote preference.

226. HALES, LOYDE W., & TOKAR, EDWARD. The effect of the quality of preceding responses on the grades assigned to subsequent responses to an essay question. *Journal of Educational Measurement*, Summer 1975, *12*, 115-117. (II)

Uses essay question responses rated from good to poor by 6 doctoral candidates in elementary education to investigate the effect of initial blocks of 5 either very good or poor answers on the grades assigned to 2 subsequent average rated answers. Subjects were 128 undergraduates in elementary education.

227. HALL, MARYANNE; MORETZ, SARA A.; & STATOM, JODELLANO. Writing before grade one—a study of early writers. *Language Arts*, May 1976, *53*, 582-585. (V-3)

Studies factors in the home background of children who were early writers and seeks to define the sequence of learning to write in relation to learning to read. The sample includes 18 children, ages 3 years 4 months to 6 years 1 month.

228. HAMMILL, DONALD; PARKER, RANDALL; & NEWCOMER, PHYLLIS. Psycho-linguistic correlations of academic achievement. *Journal of School Psychology*, July 1975, *13*, 248-254. (V-12)

Investigates the relationship of psycholinguistic abilities to academic achievement using a correlational matrix with IQ partialled out and analysis of covariance (IQ the covariate) of low, average, and high achievers. Subjects were 137 middleclass 9 year olds.

229. HAMPSHIRE, BARRY E. Tactile and visual reading. *The New Outlook for the Blind*, April 1975, *69*, 145-155. (I)

Reviews the literature on reading, including information processing aspects, the role of the sensory register, and short-term and long-term memory to compare processes involved in visual and tactile reading.

230. HANGGI, GERALD J. MRQ/ the sponge. *The Minnesota Reading Quarterly*, December 1975, *20*, 75-78. (V-9)

Examines similarities and differences between 2 sight word lists.

231. HANNAN, MICHAEL T.; FREEMAN, JOHN H.; & MEYER, JOHN W. Specification of models for organizational effectiveness. *American Sociological Review*, February 1976, *41*, 136-143. (I)

Reviews a study of school effectiveness using an organizational data model. Contrasts regression estimates from individual data models with and without estimates of student intelligence and socioeconomic level. Outcome measures were standardized reading and mathematics achievement results from 7,159 third and sixth graders in 83 schools.

232. HANSELL, T. STEVENSON. Readability, syntactic transformations, and generative semantics. *Journal of Reading*, April 1976, *19*, 557-562. (IV-8)

Compares reading rate, comprehensibility ratings, and enjoyability ratings of original and simplified versions of "good" and "sub" literature. Subjects were 216 high, middle, and low reading ability eighth graders.

233. HANSEN, CHERYL L., & LOVITT, THOMAS C. The relationship between question type and mode of reading on the ability to comprehend. *The Journal of Special Education*, Spring 1976, *10*, 53-60. (VI)

Explores the relationships between oral and silent reading and the ability to comprehend. The sample includes 7 learning-disabled boys, ages 9 to 12 from upper-middleclass homes.

234. HANSSON, GUNNAR. Further implications of the IEA studies in the mother tongue: the Swedish case. *Research in the Teaching of English*, Spring 1976, *10*, 22-30. (IV-16)

Reanalyzes Swedish reading achievement data according to father's occupation and, in high school, vocational versus academic track. Compares students' with teachers' opinions about literature.

235. HARDY, MADELINE I. What research says to the reading teacher. *Education Canada*, Winter 1975, *15*, 32-37. (I)

Summarizes some major findings on reading instruction and learning to read from the early 1900's. Presents implications of research results for teachers and schools.

236. HARMS, JEANNE MCLAIN. Children's responses to fantasy in literature. *Language Arts* (formerly *Elementary English*), October 1975, *52*, 942-946. (IV-18)

Evaluates 5, 7, and 9 year old's concepts of fantasy, realism, and causality based on responses of 30 middleclass girls interviewed after hearing 2 modern fantasy books. Uses a Piagetian developmental framework.

237. HARRIS, ALBERT J. Practical applications of reading research. *The Reading Teacher*, March 1976, *29*, 559-565. (I)

Discusses reasons reading research does or does not affect reading instruction, including findings of negative or contradictory support for some theories about instructional practices.

238. HARRIS, ALBERT J. Some new developments on readability. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 331-340. (I)

Describes and discusses methods of measuring readability.

239. HARRIS, LARRY P. Attention and learning disordered children: a review of theory and remediation. *Journal of Learning Disabilities*, February 1976, *9*, 100-110. (I)

Reviews the literature, placing attentional deficits in a pivotal position relative to inferior school performance of exceptional children. Summarizes orientation response and stimulus selection theories. Examines the efficacy of drug therapy, reducing environmental stimulation, and operant conditioning.

240. Harris, Mary B., & Trujillo, Amaryllis E. Improving study habits of junior high school students through self-management versus group discussion. *Journal of Counseling Psychology*, November 1975, *22*, 513-517. (V-6)

Compares grade point averages and self-reports of 2 experimental groups (N = 36 and 41) and a matched control group (N = 36) to assess the effectiveness of 2 different 12-week units on studying behavior.

241. Hartlage, Lawrence C. Differential age correlates of reading ability. *Perceptual and Motor Skills*, December 1975, *41*, 968-970. (IV-4)

Uses a reading screening instrument to examine the relationship of visual, auditory, and motor skills to reading achievement in 130 boys and girls in first, second, and third grades.

242. Hartley, James; Fraser, Susan; & Burnhill, Peter. Some observations on the reliability of measures used in reading and typographic research. *Journal of Reading Behavior*, Fall 1975, *7*, 283-296. (IV-19)

Calculates test-retest correlations of 9 measures of reading texts printed in various layouts, including rate, comprehension, and oral reading. Subjects included male and female university students and school children.

243. Hartmann, Paul; Husband, Charles; & Clark, Jean. A study of the handling of race in the British national press from 1963 to 1970. In *Race as News*. Paris: Unesco, 1974. Pp. 89-173. (III-2)

Analyzes the contents of all articles concerning non-whites or race relations in the United States, South Africa, Rhodesia, Britain, and British Commonwealth countries in a sample of 772 editions of 4 English dailies published between 1963 and 1970.

244. Haviland, Susan E., & Clark, Herbert H. What's new? Acquiring new information as a process in comprehension. *Journal of Verbal Learning and Verbal Behavior*, October 1974, *13*, 512-521. (IV-10)

Tests a model of comprehension in a series of experiments using speed of understanding sentences presented in a context of direct, indirect, or negative antecedent. Subjects were 53 undergraduates.

245. HAYES, E. J. The reading habits and interests of adolescents and adults. In William Latham (Ed.) The road to effective reading. *Tenth annual study conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 148-156. (I)

Summarizes American and British studies of adult and adolescent reading habits and interests. Relates findings to the role of reading generally and the role of the school in promoting reading.

246. HECHT, KATHRYN A. Teacher ratings of potential dropouts and academically gifted children: Are they related? *Journal of Teacher Education*, Summer 1975, *26*, 172-175. (II)

Uses national survey data from 22,000 teachers on 85,000 second, fourth, and sixth graders to compare predictions of dropout and gifted to variables including sex, race, attendance, socioeconomic factors, special services received, and actual academic achievement.

247. HEITZMANN, KATHLEEN A., & HEITZMANN, WM. RAY. The science of bibliotherapy: a critical review of research findings. *Reading Improvement*, Summer 1975, *12*, 120-124. (I)

Discusses historical trends in the concept of bibliotherapy from 1916, including representative studies and their limitations.

248. HENDERSON, LESLIE. Do words conceal their component letters? A critique of Johnson (1975) on the visual perception of words. *Journal of Verbal Learning and Verbal Behavior*, December 1975, *14*, 648-650. (I)

Discusses lack of controls in a previous series of experiments on word length and visual perception of words. Cites other research with conflicting findings.

249. HENDERSON, MARY ANN. Individualized reading instruction in two-year colleges. *Journal of Reading*, March 1976, *19*, 464-471. (V-8)

Compares 34 students given personalized reading instruction, including conferences and class discussion, with 24 students who used a prescriptive technique (packets containing directions, materials, and self-scoring tests) on end of course reading achievement and interest gains.

250. HENNING, GRANT H. Measuring foreign language reading comprehension. *Language Learning*, June 1975, *25*, 109-114. (V-12)

Examines predictive validity, difficulty, and discriminability of tests of cloze-recognition, synonym-antonym, and multiple choice at 2 levels of difficulty, and accuracy and grammaticality of sentences answering a question. Subjects were 27 Iranian women in a second semester English course.

251. HESHUSIUS-GILSDORF, LOUIS T., & GILSDORF, DALE L. Girls are females, boys are males: a content analysis of career materials. *Personnel and Guidance Journal*, December 1975, *54*, 207-211. (III-2)

Performs a content analysis of 2 career orientation textbooks. Analyzes pictures and their accompanying job descriptions.

252. HESTER, AL. Violence on the front pages of three American newspapers, 1924-1973. *Gazette*, 1975, *21 (4)*, 209-220. (III-2)

Analyzes front page content of 3 major newspapers sampled from 1924 to 1974. Describes frequency of violence stories, their "play" on the front page, and the importance editors give to various kinds of violence as news subjects.

253. HIEBERT, RAY ELDON; UNGURAIT, DONALD F.; & BOHN, THOMAS W. *Mass media: an introduction to modern communication.* New York: David McKay, 1974. (III-1)

Introduces the student to the grammars of mass media. Investigates how each medium codifies reality. Discusses what the media have in common as mass media rather than personal media. Includes a section on reference materials, one on organizations involved in mass communications, and an annotated bibliography.

254. HILL, WALTER. Secondary reading activity in Western New York: a survey. *Journal of Reading*, October 1975, *19*, 13-19. (V-1)

Reports results from 172 of 202 schools sent questionnaires regarding availability and type of instructional reading programs for grades 7-12.

255. HILLERICH, ROBERT L. Toward an assessable definition of literacy. *English Journal*, February 1976, *65*, 50-55. (I)

Summarizes findings from several studies and review publications in an exploration of definitions of literacy.

256. HILLOCKS, GEORGE JR. Reading, natural learning, and the interpretation of literature. *Theory Into Practice*, June 1975, *13*, 156-165. (I)

Argues for structured learning to appreciate literature in the context of research findings concerning language learning, literature interpretation by adults and adolescents, poetry preferences, and analyses of classroom interaction patterns.

257. HOFMANN, RICHARD J., & VYHONSKY, RITA J. Readability and human interest scores of thirty-six recently published introductory educational psychology texts. *American Psychologist*, July 1975, *30*, 790-792. (V-9)

Reports reading ease and interest levels estimated on 36 introductory educational psychology texts published in 1970-1974.

258. HOHENBERG, JOHN. *The Pulitzer Prizes: a history of the awards in books, drama, music, and journalism, based on the private files over six decades*. New York and London: Columbia University Press, 1974. (III-8)

Provides an account of the 714 past awards and reveals that considerable segments of the press have played a significant role in preparing the public for crises and for solutions.

259. HOLLIDAY, WILLIAM G. Teaching verbal chains using flow diagrams and texts. *AV Communication Review*, Spring 1976, *24*, 63-78. (V-7)

Investigates teaching effectiveness of single flow diagrams versus texts describing the nitrogen cycle. Subjects were 207 high school biology students randomly assigned to one of 5 treatment conditions and post tested for discriminated recall of sequential chains of verbal labels.

260. HOLMES, GEORGE R.; STOUT, ANNA L.; ROSENKRANTZ, ARTHUR L.; BICKHAM, D. WAYNE; & SCHNACKENBERG, ROBERT C. Multivariate prediction of third grade academic performance from de Hirsch index score. *Perceptual and Motor Skills*, December 1975, *41*, 735-739. (IV-14)

Uses third grade reading, spelling, and handwriting dependent measures on 42 of the original 50 children classified as high academic risk when they were 5½ years old.

261. HOWE, M. J. A., & COLLEY, LORNA. Retroactive interference in meaningful learning. *British Journal of Educational Psychology*, February 1976, *46*, 26-30. (IV-5)

Compares free and cued recall of a prose passage after 18 university students read similar or dissimilar passages. Subjects were randomly assigned to one of the 2 intervening conditions.

262. HOWE, M. J. A., & SINGER, LINDA. Presentation variables and students' activities in meaningful learning. *British Journal of Educational Psychology*, February 1975, *45*, 52-61. (IV-5)

Reports 2 studies, the first of which assesses recall of a short prose passage as a function of instructions to read, copy, or summarize (N = 86). In the second study, 96 students were used to compare recall under reading versus listening conditions. Subjects were first year college students.

263. HOWITT, DENNIS, & CUMBERBATCH, GUY. *Mass media violence and society.* New York: John Wiley & Sons, 1975. (I)

Reexamines the available research from social psychology, experimental psychology, sociology, and psychiatry. Examines the worth of each study, questions the meaning of each piece of research in its own terms and gauges the extent to which different studies are compatible with each other and imply similar policy decisions.

264. HUMKE, RONALD GENE; SCHMITT, RAYMOND L.; & GRUPP, STANLEY E. Candidates, issues and party in newspaper political advertisements. *Journalism Quarterly*, Autumn 1975, *52*, 499-504. (III-2)

Analyzes content of political advertisements published during pre-election weeks of presidential election years from 1932 to 1960 in a Bloomington, Illinois, daily. Examines relationships among party identification, candidate appeal, and issue orientation, and number of ads to number of votes.

265. HUNTER, DIANA LEE. Spoken and written word lists: a comparison. *The Reading Teacher*, December 1975, *29*, 250-253. (IV-9)

Compares word frequencies estimated from a corpus obtained through interviews of approximately 80 inner-city black 4- to 6-year-old children with 4 beginning reading lists and a corpus obtained from 5 beginning reading series.

266. HUTTON, SANDRA S. Sex-role illustrations in junior high school home economics textbooks. *Journal of Home Economics*, March 1976, *68*, 27-30. (III-2)

Analyzes 1,116 illustrations in 6 home economics textbooks for evidence of sex bias.

267. HYNDS, ERNEST C. *American Newspapers in the 1970s.* New York: Hastings House, 1975. (III-8)

Uses a variety of survey and other data to appraise the information, influence, and entertainment services and effectiveness of newspaper stories, editorials, and advertising. Includes a section on using newspapers to enhance reading achievement.

268. INTERNATIONAL INSTITUTE FOR ADULT LITERACY METHODS. Women—a majority with minority rights to education. *Literacy Discussion*, Winter 1975-76, *6*, 9-16. (III-6)

Presents data on illiteracy rates by sex and continent. Presents information on women's formal schooling in each of the major geographical regions of the world.

269. ISGUR, JAY. Establishing letter-sound associations by an object-imagining-projection method. *Journal of Learning Disabilities*, June/July 1975, *8*, 349-353. (IV-14)

Uses 26 common domestic objects whose names begin with a letter sound and whose shapes resembled the letter (*e.g.*, a pan) to teach sound-symbol associations to 10 non-readers who knew less than half of the 26 letter-sound associations.

270. JACK, W. H., & HERBERT, BARBARA HATCH. Delayed auditory feedback with dyslexics. *The Journal of Educational Research*, May/June 1975, *68*, 338-340. (IV-11)

Investigates oral reading of 10 normal readers and 5 "dyslexics" of above average verbal ability under conditions of direct and delayed auditory feedback. Subjects were college students.

271. JACOB, SAIED H. Contexts and images in reading. *Reading World*, March 1976, *15*, 167-175. (I)

Reviews selected research in mental imagery, as related to reading comprehension. Focuses on the "assumption of difference" to account for discrepancy between good and poor readers.

272. JOHNS, JERRY L. How does the Dolch List compare to recent word counts? *The Minnesota Reading Quarterly*, February 1976, *20*, 123-125, 159. (V-9)

Determines the proportions of and the particular words in 1 basic sight vocabulary list that are not included among 4 recently published word frequency lists.

273. JOHNS, JERRY L. Some comparisons between the Dolch basic sight vocabulary and the word list for the 1970's. *Reading World*, March 1976, *15*, 144-150. (V-9)

Compares proportions of words occurring in children's and adults' reading materials that are contained in 2 sight word lists.

274. JOHNS, JERRY L. Updating the Dolch basic sight vocabulary. *Reading Horizons*, Winter 1976, *16*, 104-111. (V-9)

Determines words common to 3 of 4 reading lists (not including the Dolch list) for addition to a 1974 revision of the original Dolch list.

275. JOHNSON, WILLIAM F.; KORN, THOMAS A.; & DUNN, DENNIS J. Comparing three methods of presenting occupational information. *The Vocational Guidance Quarterly*, September 1975, *24*, 62-66. (V-11)

Compares retention of a job description presented by print, audio tape, or slide-tape and with job knowledge of a no-information control group. Subjects were 58 "reluctant learners," ages 15-17, randomly assigned to treatment condition.

276. KABAK, WAYNE. Librarians wrestle with racism, sexism. *Interracial Books for Children Bulletin*, 1975, *6 (3 & 4)*, 1, 11, 14. (III-10)

Surveys children's collections in libraries in 8 major US cities and reports examples of comments by librarians who were interviewed.

277. KACHUCK, BEATRICE LEVY. Dialect in the language of inner-city children. *The Elementary School Journal*, November 1975, *76*, 105-112. (IV-8)

Considers implications for beginning reading instruction stemming from analyzing the speech of 20 randomly selected first graders in a large, all-black school. The children were tape recorded while conversing individually with the investigator about a picture book.

278. KAGAN, SPENCER, & ZAHN, G. LAWRENCE. Field dependence and the school achievement gap between Anglo-American and Mexican-American children. *Journal of Educational Psychology*, October 1975, *67*, 643-650. (IV-15)

Uses multiple regression and path analysis to interpret relationships among ethnic background, performance on a visual alignment task, sex, and academic achievement. Subjects were 134 second, fourth, and sixth graders in a semi-rural, lower income school.

279. KAID, LYNDA LEE. Newspaper treatment of a candidate's news releases. *Journalism Quarterly*, Spring 1976, *53*, 135-137. (III-2)

Reports results of monitoring 25 newspapers in relation to all news releases issued by an Illinois state senate candidate to determine how often news releases are used, type used, and how they are handled.

280. KAISER, ROBERT A.; NEILS, CHERYL F.; & FLORIANI, BERNARD P. Syntactic complexity of primary grade reading materi-

als: a preliminary look. *The Reading Teacher*, December 1975, *29*, 262-266. (V-9)

Uses a syntactic complexity formula to analyze and compare 2 traditional and 2 linguistic basal readers. Passages selected were of equal average sentence length.

281. Kapelis, Lia. Early identification of reading failure: a comparison of two screening tests and teacher forecasts. *Journal of Learning Disabilities*, December 1975, *8*, 638-641. (IV-14)

Estimates predictive validity of teacher judgments and 2 prereading skills tests. Uses stepwise regression to obtain the best predictor combination. Subjects were 11 teachers and their 100 lower- and middleclass white students tested at the beginning and end of first grade.

282. Kaplan, Frank L. Czechoslovakia's press law, 1967-68: decontrolling the mass media. *Journalism Quarterly*, Autumn 1975, *52*, 450-457. (I)

Integrates newspaper stories with findings from studies regarding the abolition of prior restraint in a discussion of the effect of this amendment to the press law on the intellectual community and the militarization of Czechoslovakia.

283. Karweit, Nancy. Quantity of schooling: major educational factor? *Educational Researcher*, February 1976, *5*, 15-17 (IV-13)

Uses regression analysis of data from 3 large scale studies to study the relationship between length of school attendance, verbal ability, and academic achievement.

284. Kastner, Sheldon B., & Rickards, Carol. Mediated memory with novel and familiar stimuli in good and poor readers. *The Journal of Genetic Psychology*, March 1974, *124*, 105-113. (IV-14)

Examines memory processes and rehearsal strategies in 24 good and poor readers at the third grade level.

285. Kavanagh, Michael J., & Beal, David L. The relationship between reader usage and attributes of action line columns. *Journalism Quarterly*, Autumn 1975, *52*, 485-492, 553. (III-14)

Uses previously collected Action Line survey data to test hypotheses that more readers will write to columns that stress problem solving over information giving, that name companies, that spend more money, and that report higher proportions of problem solving success than other similar columns.

286. KEETZ, MARY A. Ability of students to identify correct responses before reading: a replication. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 235-240. (V-12)

Compares results of administering passage dependent multiple choice items from a standardized comprehension test to 98 randomly selected first year English students with results of a previous study. Items were administered prior to and then subsequent to reading the passage.

287. KELLAGHAN, THOMAS. Intelligence and achievement in a disadvantaged population: a cross-lagged panel analysis. *The Irish Journal of Education*, Summer 1973, *7*, 23-28. (IV-3)

Investigates evidence for and direction of causality in the inter-correlations between scores on intelligence and achievement tests administered to 59 children attending a preschool at age 3, and again at 5.

288. KELLEY, WILLIAM G. Jackie Robinson and the press. *Journalism Quarterly*, Spring 1976, *53*, 137-139. (III-2)

Examines 4 metropolitan newspapers and 6 magazines for location, number, length, and objectivity of articles covering the signing of the first black player to a major league baseball team.

289. KENDALL, JOHN C. The New York City press and anti-Canadianism: a new perspective on the Civil War years. *Journalism Quarterly*, Autumn 1975, *52*, 522-530. (I)

Examines conflicting findings of pro-Northern and anti-Northern sentiments during the 1960's in studies of Canadian public opinion in the framework of New York newspapers' attitudes toward Canada at the time.

290. KENNELLY, KEVIN, & KINLEY, SHIRLEY. Perceived contingency of teacher administered reinforcements and academic performance of boys. *Psychology in the Schools*, October 1975, *12*, 449-453. (IV-15)

Investigates relationships of locus of control to grade point average, standardized achievement scores, and students' ratings of teachers' reward and punishment behaviors. Subjects were 49 boys from 3 sixth grade classes.

291. KENT, K. E., & RUSH, RAMONA R. How communication behavior of older persons affects their public affairs knowledge. *Journalism Quarterly*, Spring 1976, *53*, 40-46. (III-1)

Investigates the relationship of knowledge of public affairs to mass media exposure and demographic variables. The 150 interviewees were from a foster grandparent program and 2 retired people's associations in Gainesville, Florida.

292. Kershner, John R. Reading and laterality revisited. *The Journal of Special Education*, Fall 1975, *9*, 269-279. (I)

Considers recent research and speculates on the relationship of lateral preference, lateral awareness and reading.

293. Kidder, Steven J., & Kuethe, James L. Children's parental schemata as related to reading achievement. *Perceptual and Motor Skills*, June 1975, *40*, 971-973. (IV-15)

Assesses relationship between 274 fifth graders' placement of outlined figures (a male with male students, a female with female students) to teacher classifications of the children's reading performance.

294. Kingsbury, Mary. The world of work in children's fiction. *Language Arts*, October 1975, *52*, 972-975, 1018. (III-2)

Analyzes 91 children's books published in the 1930's, 1950's, and 1970's to evaluate their portrayal of work models and work-related values.

295. Kingston, Albert J.; Brosier, Glenn F.; & Hsu, Yi-Ming. The inventory of teacher knowledge of reading—a validation. *The Reading Teacher*, November 1975, *29*, 133-136. (II)

Reports validation data on a 95-item multiple choice test of reading principles and instructional practices administered to 232 subjects including reading, elementary, and secondary teachers, and undergraduates who had and had not completed at least 1 reading course.

296. Kirk, Samuel A., & Elkins, John. Characteristics of children enrolled in the child service demonstration centers. *Journal of Learning Disabilities*, December 1975, *8*, 630-637. (IV-14)

Uses questionnaire data on over 3,000 children attending learning disability centers in 21 states to describe setting, emphasis, and type of remedial program, and age, sex, and intellectual and academic achievement of the children.

297. Kirsch, Dorothy I.; Pehrsson, Robert S. V.; & Robinson, H. Alan. Expressed reading interests of young children: an international study. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 302-317. (IV-18)

Surveys reading interests of 1,045 girls and 1,065 boys in the first and second years of formal schooling to determine similarities and differences among 10 countries, from first to second year, and within each of the school years.

298. KLARE, GEORGE R. Judging readability. *Instructional Science*, January 1976, *5*, 55-61. (V-9)

Compares readability rankings of 5 texts taken from a graded reading test to the test developers' grade levels. Judges were 56 professional writers.

299. KLEIN, GARY A. Effect of attentional demands on context utilization. *Journal of Educational Psychology*, February 1976, *68*, 25-31. (IV-10)

Prevents automatic perceptual processing in 3 experiments requiring responses competing with reading comprehension measured by ability to indicate word boundaries in coherent and incoherent texts printed without capitalization, punctuation, or extra spaces between words. Total N was 224, mostly college students.

300. KLEIN, HELEN ALTMAN; KLEIN, GARY A.; & HILDUM, DONALD C. Articulatory and constituent phrases as facilitators of word identification decisions. *Journal of Experimental Psychology*, August 1974, *103*, 337-342. (IV-10)

Uses a word boundary task in 3 experiments exploring the use of structural cues in processing written language. Subjects were undergraduate students.

301. KLEIN, HELEN ALTMAN; KLEIN, GARY A.; & VIGODA, CHRISTY HOPKINS. The utilization of contextual information by high school students. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 148-154. (IV-10)

Investigates the relationship between reading competence and use of context in word identification decisions by 144 ninth through twelfth graders. Uses a word boundary task involving 200-word texts with no cues to word boundaries to measure word identification speed as a function of context.

302. KLEIN, MARVIN L. Inferring from the conditional; an exploration of inferential judgments by students at selected grade levels. *Research in the Teaching of English*, Fall 1975, *9 (2)*, 162-183. (IV-10)

Tests 120 fourth, eighth, and twelfth graders' comprehension of *if-then* propositions, using multiple choice items in which the conditional and negation were varied. Investigates the relationship of performance on this task to performance of concrete operations tasks presented in written form.

303. KLINEBERG, OTTO. Attitudinal change with special reference to the mass media. In *Race as news*. Paris: Unesco, 1974. Pp. 37-54. (I)

Reviews the literature on attitude change, especially as influenced by mass media, under the headings of process, techniques, and the portrayal of violence.

304. KOENKE, KARL. Reading programs in Illinois high schools: three comments. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 143-147. (II)

Reports survey results from 315 of 664 high school English departments in Illinois, excluding Chicago, that were mailed questionnaires.

305. KOHN, MARTIN, & COHEN, JACOB. Emotional impairment and achievement deficit in disadvantaged children—fact or myth? *Genetic Psychology Monographs*, August 1975, *92*, 57-78. (IV-16)

Examines the relationship between demographic and preschool social-emotional variables, on the one hand, and first grade social-emotional and academic achievement variables, on the other. Subjects were 323 children from New York City public day care centers followed up 12 and 18 months later in elementary schools.

306. KOLERS, PAUL A. Pattern-analyzing disability in poor readers. *Developmental Psychology*, May 1975, *11*, 282-290. (IV-14)

Uses sentences printed in conventional or reverse orientation for either or both first and second oral reading to test for semantic and graphemic recognition. Subjects were 15 good and 22 poor readers, ages 10 to 14, from 13 Toronto schools.

307. KOLERS, PAUL A. Specificity of operations in sentence recognition. *Cognitive Psychology*, July 1975, *7*, 289-306. (IV-8)

Uses sentences presented twice, initially auditorily or visually, in conventional and/or inverted typography, in French and/or English with oral reading time on second presentation as criterion in 3 investigations of the roles of semantic and graphemic pattern analysis as components of sentence memory. Subjects were 30 college students, including 20 bilinguals.

308. KOLERS, PAUL A. Two kinds of recognition. *Canadian Journal of Psychology*, March 1974, *28*, 51-61. (IV-8)

Examines the relative extent to which familiarity, typography, and semantic characteristics of written material influence the information processing activities of 12 college subjects.

309. KOPPENHAVER, ALBERT H. Reading and the home environment. *Claremont Reading Conference 38th Yearbook*, 1974. Pp. 122-129. (IV-16)

Compares 30 high and 30 low achieving readers randomly selected from a fifth grade population on IQ, sex, and measures of home environment. Uses analysis of covariance, with IQ as the covariate, to examine relationships among reading, sex, and environment.

310. KREGER, DONALD S. Press opinion in the Eagleton affair. *Journalism Monographs*, August 1974, *35*. Lexington, Kentucky: Association for Education in Journalism. (III-2)

Studies press coverage during the week of vice-presidential candidate Eagleton's medical disclosures, synthesizes editorial reactions, and critiques press performance. Examines 14 magazines and 52 daily newspapers.

311. KRETSCHMER, JOSEPH C. Updating the Fry readability formula. *The Reading Teacher*, March 1976, *29*, 555-558. (IV-19)

Proposes correcting for inflated syllable counts due to 2- and 3-syllable common words (*anything*, *every*). Compares readability estimates for 3 texts based on the original Fry count, corrected Fry count, and another formula.

312. KRINGEN, JOHN A. An exploration of the "red-expert" issue in China through content analysis. *Asian Survey*, August 1975, *15*, 693-707. (III-2)

Analyzes 81 documents which cover a time span from 1958-1972 in an attempt to provide a systematic description of the usage of the term "red-expert." Multi-dimensionality, individual interpretation, and change over time are considered.

313. KRIPPNER, STANLEY. An alternative to drug treatment for hyperactive children. *Academic Therapy*, Summer 1975, *10*, 433-439. (V-11)

Uses standardized academic achievement tests, figure and geometric drawings to assess the progress of 65 hyperactive children in an open classroom program, one of the alternate treatments, sensory-motor training, and dietary alterations.

314. KRUEGER, LESTER E. Familiarity effects in visual information processing. *Psychological Bulletin*, November 1975, *82*, 949-974. (I)

Reviews the literature on tachistoscopic recognition of words and non-words, visual comparison, letter detection, perceived clarity and letter mutilation. Examines the evidence for the loci of the familiarity effect in functions of perception, memory, and set.

315. KRULEE, GILBERT K., & SCHWARTZ, HOMER R. Scanning processes and sentence recognition. *Journal of Psycholinguistic Research*, April 1975, *4*, 141-158. (IV-5)

Investigates descriptive effects on immediate recall of 24 college students and staff. Three types of sentences varying in length were printed on paper tape varying in size and pulled through a window of varying size at varying rates to interfere with ability to read aloud.

316. KULHAVY, R. W., & SWENSON, INGRID. Imagery instructions and the comprehension of text. *British Journal of Educational Psychology*, February 1975, *45*, 47-51. (IV-10)

Measures verbatim and semantic recall of questions appearing in programed text immediately (N = 47) and/or 1 week later (all 119 fifth and sixth grade subjects). Fifty subjects were instructed to form mental pictures while reading. Control groups of 11 and 10 read only text or questions respectively.

317. KULHAVY, RAYMOND W.; DYER, JAMES W.; & SILVER, LINDA. The effects of note taking and test expectancy on the learning of text material. *The Journal of Educational Research*, July/August 1975, *68*, 363-365. (IV-5)

Analyzes relationships of study behavior (note-taking, underlining, read only), test expectancy (multiple choice, constructed response, none), and study time to recall of an 845-word passage. Subjects were 144 high school students.

318. KULIK, JAMES A.; KULIK, CHEN-LIN C.; & SMITH, BEVERLY B. Research on the personalized system of instruction. *Programmed Learning and Educational Technology*, February 1976, *13*, 23-30. (I)

Summarizes findings on the effectiveness of individualized test and immediate feedback system of instruction and from experiments isolating sources of its effectiveness.

319. KUMAR, V. K. Functional significance of orienters in prose learning. *Journal of Experimental Education*, Summer 1975, *43*, 72-77. (I)

Identifies 5 types of verbal features presumed to focus a reader's attention, *e.g.*, "note that. . . ." Discusses research on adult readers' retention of information following 2 types of such cues and their subjective reaction to these devices.

320. Ladd, Everett Carll, & Lipset, Seymour Martin. The general periodicals professors read. *The Chronicle of Higher Education*, January 19, 1976, *11*, 14. (III-5)

Reports a readership survey of college and university faculty.

321. Lahaderne, Henriette M. Feminized schools—unpromising myth to explain boys' reading problems. *The Reading Teacher*, May 1976, *29*, 776-786. (I)

Reviews 22 studies of comparing male and female teachers' perceptions of pupils, classroom behaviors, and pupil outcomes by teacher sex.

322. Lahey, Benjamin B., & McNees, M. Patrick. Letter-discrimination errors in kindergarten through third grade: assessment and operant training. *The Journal of Special Education*, Summer 1975, *9*, 191-199. (IV-6)

Considers the problem of training perceptual skills in young children through a behavioral perspective. Includes a normative study with a sample of 200 from kindergarten to third grade and a sample of 29 low income preschool children in a training experiment.

323. Lamb, Pose. Reading and television in the United States. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 370-382. (I)

Summarizes research on the influence of extra curricular television on children's reading and the use of instructional television in the classroom.

324. Lamme, Linda Leonard. Self-contained to departmentalized: how reading habits changed. *The Elementary School Journal*, January 1976, *76*, 208-218. (IV-18)

Reports a longitudinal study of reading habits reported by children on weekly forms and in yearly interviews. The children were in self-contained classes in fourth grade (N = 95) and had subject teachers (reading, English, math, science, and social studies) in fifth (N = 91) and sixth (N = 99) grades.

325. Lang, Janell Baker. Self-concept and reading achievement—an annotated bibliography. *The Reading Teacher*, May 1976, *29*, 787-793. (I)

Annotates 58 publications concerning self concept and reading achievement.

326. Lantz, Herman R.; Keyes, Jane; and Schultz, Martin. The American family in the preindustrial period: from base

lines in history to change. *American Sociological Review*, February 1975, *40*, 21-36. (III-2)

Involves a content analysis of magazines for the period 1825-1850. Special attention is given to power patterns between husband and wife, romantic love, motivations for marriage, and advocated and actual sanctions implemented toward individuals involved in premarital and extramarital sexual relationships.

327. LARSEN, JANET J.; TILLMAN, CHESTER E.; & CRANNEY, A. GARR. Trends in college freshman reading ability. *Journal of Reading*, February 1976, *19*, 367-369. (V-2)

Reports raw scores equivalent to the 5th, 25th, 50th, 75th, and 95th percentile ranks on a test of reading rate, comprehension, and vocabulary administered to all entering students from 1960 through 1970, approximately 3,000 students per year.

328. LASKY, ELAINE A.; JAY, BARBARA; & HANZ-EHRMAN, MARY. Meaningful and linguistic variables in auditory processing. *Journal of Learning Disabilities*, November 1975, *8*, 570-577. (IV-14)

Analyzes performance of matched groups of 10 learning disabled and 10 normal children, ages 5-8, on delayed recall of verbal/non-verbal, meaningful/non-meaningful auditory stimuli. Discusses implications for auditory training and remediation programs.

329. LATHAM, WILLIAM. The teaching of reading—a crisis? In William Latham (Ed.) The road to effective reading. *Tenth annual study conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 8-16. (I)

Summarizes several surveys of reading attainment, literacy studies, and criticism of educational methods in a discussion of teaching, learning, and research needs.

330. LAUGHLIN, ROSEMARY M. The state of school dictionaries. *Language Arts* (formerly *Elementary English*) September 1975, *52*, 826-830, 842. (V-9)

Compares 7 widely used elementary school dictionaries on evaluation criteria such as words included, clarity and extent of definitions, pronunciation key, and illustrations.

331. LAWRENCE, DENIS. An experimental investigation into the effects of counselling retarded readers. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 434-441. (IV-14)

Reports a series of studies comparing retarded readers' gains in word recognition subsequent to counseling with or without remedial reading, taught by a specialist or non-professional, or no-treatment. Children in each group in each study were matched on chronological age, sex, mental age, and reading attainment.

332. LAWSON, ANTON E. Sex difference in concrete and formal reasoning ability as measured by manipulative tasks and written tasks. *Science Education*, July-September 1975, *59*, 397-405. (IV-2)

Compares performance of boys and girls on Piagetian tasks presented individually and in paper and pencil group tests. Subjects were 62 biology students in a rural high school.

333. LAWSON, ANTON E.; NORDLAND, FLOYD H.; & KAHLE, JANE B. Levels of intellectual development and reading ability in disadvantaged students and the teaching of science. *Science Education*, January-March 1975, *59*, 113-125. (IV-3)

Examines relationships among scores on 10 Piagetian tasks and standardized reading achievement scores from 35 high school students in a predominantly black and Spanish-American area. Discusses results applied to teaching science.

334. LENT, JOHN A. Government policies reshape Malaysia's diverse media. *Journalism Quarterly*, Winter 1975, *52*, 663-669, 734. (III-1)

Describes influences on and development of mass media in Malaysia from 1948 to the present, emphasizing news and advertising.

335. LESGOLD, ALAN M.; MCCORMICK, CLAIRE; & GOLINKOFF, ROBERTA MICHNICK. Imagery training and children's prose learning. *Journal of Educational Psychology*, October 1975, *67*, 663-667. (IV-10)

Uses a pretest-post test design to examine the effects of passage illustration training (12 sessions)—relative to a reading-practice control procedure—on reading comprehension. Subjects were 10 third and 22 fourth graders in one experiment and 42 children in a replication with modifications.

336. LETON, DONALD A. The structure of the Stanford Diagnostic Reading Test in relation to the assessment of learning-disabled pupils. *Psychology in the Schools*, January 1974, *11*, 40-47. (IV-14)

Examines 166 learning disabled subjects in grades 3 through 7 in an attempt to discern the utility of the *Stanford Diagnostic Reading Test* in assessing reading problems of learning disabled pupils.

337. LEVITON, HARVEY, & KIRALY, JOHN. Achievement and self-concept in young LD children. *Academic Therapy*, Summer 1975, *10*, 453-455. (IV-15)

Correlates a measure of self concept with standardized reading and mathematics achievement scores from 52 male and 12 female 7- to 9-year-old learning disabled children.

338. LEVY, BETTY ANN. Vocalization and suppression effects in sentence memory. *Journal of Verbal Learning and Verbal Behavior*, June 1975, *14*, 304-316. (IV-4)

Investigates the effect on sentence recognition of phonemic or auditory processing during reading in 3 experiments presenting sentences auditorily or visually, in isolation or within a paragraph, for subjects to read orally, silently, or silently while counting softly. A total of 160 paid high school and undergraduate students participated.

339. LEWIS, JOHN, & ADANK, RICHARD. The relationship between attitudes toward school and achievement for groups of elementary school children exposed to two models of instruction. *Educational and Psychological Measurement*, Summer 1975, *35*, 503-505. (IV-13)

Compares 335 students in a traditional school (self-contained classes) with 286 students using computer-backed individualized programs on school attitudes and standardized achievement test scores. Subjects were in grades 1-6.

340. LIMMER, W. W., *et al.* Remedial reading: a survey in North Bedfordshire. *Reading*, June 1974, *8*, 33-39. (V-1)

Reports results of a questionnaire survey (63 responses) of opinions and practices regarding remedial reading in 1 English city.

341. LINKE, RUSSELL D. Influence of cultural background on hierarchical learning. *Journal of Educational Psychology*, December 1974, *66*, 911-918. (IV-8)

Uses task analysis to identify components of graphical interpretation for sequential presentation. Compares criterion test results from 192 Australians (ages 11-14) and 200 indigenous New Guineans (ages 13-19) following the programed instruction.

342. LIPTON, AARON. Reading behavior of children with emotional problems: a psycholinguistic perspective. *Reading World*, October 1975, *15*, 10-22. (IV-11)

Analyzes samples of oral reading from 6 children, ages 7 to 15, in relation to other behavior observed and elicited during the reading task.

343. LISTER, HAL. *The suburban press: a separate journalism*. Columbia, Missouri: Lucas Brothers Publishers, 1975. (III-11)

Investigates the nature of the suburban press, its history and the development of suburbia. Questions whether the suburban press performs functions not satisfied by other media. Uses a sample of newspapers with more than 10,000 circulation in politically autonomous communities outside of central cities.

344. LOBBAN, GLENYS. Sex-roles in reading schemes. *Educational Review*, June 1975, *27*, 202-210. (III-2)

Analyzes content of 50 readers from 2 series published in 1970 and 1973. Compares sex roles presented in these readers with those reported previously on series published before 1970.

345. LOVITT, THOMAS C. Applied behavior analysis and learning disabilities, Part II: Specific research recommendations and suggestions for practitioners. *Journal of Learning Disabilities*, October 1975, *8*, 504-518. (I)

Reviews selected studies of behavior modification principles using the a-b-a design classified by curriculum—including reading, spelling, and composition.

346. LUCAS, MARILYN S., & SINGER, HARRY. Dialect in relation to oral reading achievement: recoding, encoding, or merely a code? *Journal of Reading Behavior*, Summer 1975, *7*, 137-148. (IV-11)

Examines the relationship or oral reading to dialect measured by standardized tests, analysis of spontaneous speech, and assessment of family language background. Subjects were 60 Mexican-American children in grades 1 to 3.

347. LUGENBEEL, BARBARA DERRICK. Defining story patterns in Good Housekeeping. *Journalism Quarterly*, Autumn 1975, *52*, 548-550. (III-2)

Codes protagonists, problems, goals, complications, crises, decisions, and solutions in a sample of 24 stories published over a 12-month period in a 90-year-old magazine for women.

348. LUMBY, MALCOLM E. Ann Landers' advice column: 1958 and 1971. *Journalism Quarterly*, Spring 1976, *53*, 129-132. (III-2)

Analyses content of advice columns sampled from 1958 and 1971 newspapers to compare values expressed toward material goals, affiliation, adjustment, manners and sex.

349. LUNSTRUM, JOHN P. Reading in the social studies: a preliminary analysis of recent research. *Social Education*, January 1976, *40*, 10-18. (I)

Attempts to identify and clarify new developments, persistent issues, and critical needs in relevant research in order to assess the extent and nature of the reading disabilities which impair learning in the social studies.

350. LYCZAK, RICHARD A. Learning to read: the redundant cues approach. *Journal of Educational Psychology*, April 1976, *68*, 157-166. (IV-5)

Reports 2 experiments investigating the effects of color coding sounds in Thai syllables on learning their pronunciation and on transfer to syllables which were not color coded. A total of 96 psychology student volunteers participated.

351. LYSTAD, MARY. From Dr. Mather to Dr. Seuss: over 200 years of American children's books. *Children Today*, May-June 1976, *5*, 10-15. (III-10)

Reviews the development of children's books in America over a 300-year period. Investigates attitudinal changes through an analysis of the content of children's literature.

352. MACDONALD-ROSS, MICHAEL, & WALLER, ROBERT. Criticism, alternatives and tests: a conceptual framework for improving typography. *Programmed Learning and Educational Technology*, March 1975, *12*, 75-83. (I)

Reviews legibility research and presents a practical 3-part cyclical research model using the know-how of typographers and designers illustrated by a critical analysis of college texts.

353. MACGINITIE, WALTER H. Difficulty with logical operations. *The Reading Teacher*, January 1976, *29*, 371-375. (IV-3)

Develops abstract notation corresponding to principles taught children learning to read based on lessons presented in several teachers' manuals. Uses analogue lessons given children to study the difficulty of the reasoning required in taking the steps leading to application of phonics principles.

354. MACGINITIE, WALTER H. Research suggestions from the 'Literature Search.' *Reading Research Quarterly*, 1975-1976, *11* (*1*), 7-35. (I)

Discusses research suggestions from a USOE project which identified significant contributions in language development, learning to read, and the reading process. Organizes needed research under the headings: Perceptual, attentional, and cognitive processes; Language development and comprehension; Methods of instruction; and Social context, dialect, and bilingualism.

355. MACLEOD, D. S. Assessing reading progress in secondary schools. In William Latham (Ed.) The road to effective reading.

Tenth annual study conference of the United Kingdom Reading Association. London: Ward Lock Educational, 1975. Pp. 157-164. (IV-13)

Describes a project to investigate reading achievement, textbook readability, and out-of-school reading habits of students in a comprehensive rather than a representative sample of 14 Scottish secondary schools.

356. Mahmoudi, Homayoun M., & Snibbe, John R. Manipulating expectancy in the affective domain and its effects on achievement, intelligence, and personality. *Psychology in the Schools*, October 1974, *11*, 449-457. (IV-13)

Uses analysis of variance to test the effects on pretest and post test differences of reading a statement to teacher (E_1), students (E_2) or both (E_3)—attesting to their "specialness." Subjects were 5 fifth grades (2 control groups), N = 107.

357. Malley, J. David. The measurement of reading skills. *Journal of Learning Disabilities*, June/July 1975, *8*, 377-381. (IV-10)

Uses a multi-trait, multi-method matrix to assess the validity of differentiated diagnostic reading skills on 2 norm referenced tests, a criterion referenced test, and a teacher rating scale. Subjects were 87 third graders.

358. Marholin, David, II; McInnis, Elizabeth T.; and Heads, Tom B. Effect of two free-time reinforcement procedures on academic performance in a class of behavior problem children. *Journal of Educational Psychology*, December 1974, *66*, 872-879. (IV-5)

Presents complete data (65 sessions) on reading, mathematics, and English performance of 3 children, ages 11 to 14, in a state mental health facility. The children were given free time contingent upon reading or upon chance (1 of 3 subjects).

359. Marquez, F. T. The relationship of advertising and culture in the Philippines. *Journalism Quarterly*, Autumn 1975, *52*, 436-442. (III-12)

Analyzes 1,027 samples of display advertising in Philippine newspapers and magazines for variables such as concepts of masculinity, femininity, time, and space. Compares findings with those from sociological and anthropological studies of Philippine culture.

360. Marten, Laurel A., & Matlin, Margaret W. Does sexism in elementary readers still exist? *The Reading Teacher*, May 1976, *29*, 764-767. (III-2)

Uses chi square to compare representations of males and females in textbooks published before and after 1971 (N = 16) by the same publishers for first and sixth grades.

361. MARTINSON, DAVID L. Coverage of LaFollette offers insights for 1972 campaign. *Journalism Quarterly*, Autumn 1975, *52*, 539-542. (III-2)

Analyzes content of 1924 pre-election articles and editorials in newspapers identified as conservative Republican, moderate, and Democratic. Compares coverage of the McGovern and LaFollette presidential campaigns.

362. MARZANO, ROBERT J.; CASE, NORMA; DEBOOY, ANNE; & PROCHORUK, KATHY. Are syllabication and reading ability related? *Journal of Reading*, April 1976, *19*, 545-547. (V-6)

Uses the correlation between gains scores in syllabication and reading comprehension subtests administered in Fall, 1974, and Spring, 1975, to 275 middle school students as an indication of the inadvisability of teaching syllabication rules.

363. MASON, JANA M. Institute for child behavior and development. The acquisition of reading skills: a developmental stage processing model. *Reading Improvement*, Winter 1975, *12*, 195-202. (I)

Draws on analyses of pronunciation errors made by unskilled readers and information processing research in reading and recognition in proposing a model of learning to read.

364. MASON, MILDRED; KATZ, LEONARD; & WICKLUND, DAVID A. Immediate spatial order memory and item memory in sixth-grade children as a function of reader ability. *Journal of Educational Psychology*, October 1975, *67*, 610-616. (IV-14)

Compares good with poor grade 6 readers on memory for consonant and digit strings in 2 experiments.

365. MATHEWSON, GROVER C., & PEREYRA-SUAREZ, DENISE M. Spanish language interference with acoustic-phonetic skills and reading. *Journal of Reading Behavior*, Summer 1975, *7*, 187-196. (IV-8)

Tests the effect of Spanish language background on discrimination of standard English speech sounds and reading achievement. Subjects were 80 second graders.

366. MAVROGENES, NANCY A.; HANSON, EARL F.; & WINKLEY, CAROL K. A guide to tests of factors that inhibit learning to read. *The Reading Teacher*, January 1976, *29*, 343-358. (I)

Provides an annotated, evaluative list of tests categorized as vision, visual-motor, sensory-motor, perceptual-motor, hearing, speech, language, screening, and combined tests.

367. MAYER, RICHARD E. Forward transfer of different reading strategies evoked by testlike events in mathematics text. *Journal of Educational Psychology*, April 1975, *67*, 165-169. (IV-5)

Presents questions before or after passages asking for definition, calculation, application, all 3, or none to assess the effects of practice question placement and type on post test question type. Subjects were 80 introductory psychology students.

368. MAYER, RICHARD E.; STIEHL, C. CHRISTIAN; & GREENO, JAMES G. Acquisition of understanding and skill in relation to subjects' preparation and meaningfulness of instruction. *Journal of Educational Psychology*, June 1975, *67*, 331-350. (IV-5)

Reports 4 experiments investigating the effects on post tests of aptitude, method of instruction, previous experience, and differences among post test items. A total of 224 paid college students participated.

369. MAZURKIEWICZ, ALBERT J. What the professor doesn't know about phonics can hurt! *Reading World*, December 1975, *15*, 65-86. (II)

Reports questionnaire results from a random sample of the College Reading Association teacher education members (222 replies of 298 surveyed) regarding knowledge of terms used in reading instruction and their teaching of phonics principles to in-service and preservice teachers.

370. MCCANN, SUSAN, & BARRON, RICHARD F. The effect of student-conducted componential analysis upon concept differentiation in a passage of social science content. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975, Pp. 274-278. (IV-9)

Assesses understanding of vocabulary relationships after students read passages of assumed unfamiliar content and organized selected vocabulary. The subjects read independently or with teacher help or they reread the passages. The 108 average and below average tenth graders were randomly assigned to treatment groups.

371. MCCLURE, ROBERT D., & PATTERSON, THOMAS E. Print vs. network news. *Journal of Communication*, Spring 1976, *26*, 23-28. (III-1)

Reports on results of a stratified sample of voters selected by standard area probability techniques. Investigates the effect of media usage on the respondents' change in personal feelings about salience of issues during the 1972 national political campaign.

372. McCREATH, ETHEL E. An investigation of reading habits, reading interests, and their relationship to reading improvement of students in an urban opendoor junior college. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 100-105. (IV-18)

Correlates reading gains scores with scores on a questionnaire assessing reading activities and attitudes of 89 students, ages 18 to 48.

373. McCUE, ANDY. Evolving Chinese language dailies serve immigrants in New York City. *Journalism Quarterly*, Summer 1975, *52*, 272-276. (III-2)

Describes the effect of changes in New York City Chinese population on format and content of 7 Chinese language newspapers and the establishing of new publications.

374. McDONAGH, DECLAN. A survey of reading comprehension in Dublin city schools. *The Irish Journal of Education*, Summer 1973, *7*, 5-10. (V-2)

Compares reading attainment of a representative sample of Dublin 11 year olds (N = 1,405) tested in 1969 to that of a similar sample tested in 1964.

375. McGUIGAN, F. J., & WINSTEAD, C. L., JR. Discriminative relationship between covert oral behavior and the phonemic system in internal information processing. *Journal of Experimental Psychology*, November 1974, *103*, 885-890. (IV-1)

Analyzes electromyographic measures of 12 right-handed subjects' covert lip and tongue responses taken while they read, memorized, and wrote primarily bilabial and primarily lingual-alveolar material.

376. McKINNEY, JAMES D.; MASON, JEANNE; PERKERSON, KATHI; & CLIFFORD, MIRIAM. Relationship between classroom behavior and academic achievement. *Journal of Educational Psychology*, April 1975, *67*, 198-203. (IV-13)

Reports multiple *R's* between academic achievement and ratings of 12 categories of behavior observed in fall and spring. Subjects were 61 white and 29 black second graders.

377. McLAUGHLIN, JOSEPH, & ANDREWS, JEAN. The reading habits of deaf adults in Baltimore. *American Annals of the Deaf*, October 1975-May 1976, *120*, 497-501. (VI)

Interviews a representative sample of 36 urban deaf adults regarding the extent and nature of reading material which they enjoy.

378. McLEOD, JOHN. Uncertainty reduction in different languages through reading comprehension. *Journal of Psycholinguistic Research*, October 1975, *4*, 343-355. (IV-10)

Explores the feasibility of constructing a multi-lingual reading comprehension test. Administers parallel cloze tests in English, French, German, Czech, and Polish to 25 children in each level from third to sixth year in school and to groups of college, lycee, or gymnasium students.

379. McNINCH, GEORGE. Experiments in phoneme shifting perceptions in pre literate and literate samples. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 193-198. (IV-13)

Analyzes the relation of ability to identify reversed phonemes (*pam-map*) to readiness (30 first graders) or achievement (28 second graders). Subjects were children scoring above the 60th or below the 40th percentiles on standardized reading tests administered in September.

380. McTEER, J. HUGH; BLANTON, F. LAMAR; & LEE, H. WAYNE. The relationship of selected variables to student interest in social studies in comparison with other academic areas. *The Journal of Educational Research*, February 1975, *68*, 238-240. (IV-2)

Compares IQ, reading achievement, grade point average, and parents' education of 300 tenth, eleventh, and twelfth graders grouped according to their patterns of attitudes toward 4 school subjects.

381. MENYUK, PAULA. Relations between acquisition of phonology and reading. In John T. Guthrie (Ed.) *Aspects of reading acquisition.* Baltimore and London: The Johns Hopkins University Press, 1976. Pp. 89-110. (I)

Reviews studies dealing with the development of speech perception, reading acquisition and phonology and reading acquisition and language difference. Investigates the similarities between oral language and written language and the dependency of written language acquisition on oral language knowledge.

382. MERTZ, MAIA PANK. Understanding the adolescent reader. *Theory Into Practice*, June 1975, *14*, 179-185. (I)

Summarizes findings from studies of motivation for, preferences in, and attitudes toward reading in relation to a discussion of the dynamics of adolescence.

383. MEYER, BONNIE J. F. Identification of the structure of prose and its implications for the study of reading and memory. *Journal of Reading Behavior*, Spring 1975, *7*, 7-47. (I)

Reviews the literature on reading and testing for comprehension. Describes findings from 2 studies using 48 undergraduates given passages similar in content but differing in structure to demonstrate a system for analyzing organization of textual information.

384. MEYER, BONNIE J. *The organization of prose and its effects on memory*. Vol. 1. New York: North-Holland American Elsevier, 1975. (IV-5)

Presents a methodology for identifying the structure of ideas in a passage and scoring recall protocols on the passage. Investigates the effect of prose structure on recall of ideas in 105 introductory psychology students.

385. MEYER, DAVID E., & SCHVANEVELDT, ROGER W. Meaning, memory structure, and mental processes. *Science*, April 1976, *192*, 27-33. (I)

Discusses the relationship of word detectors to semantic memory suggested by results of experiments testing hypotheses regarding retrieval of semantic information from long term memory, including some involving word recognition when familiarity, legibility, and response mode were varied.

386. MEYER, JOHN C., JR. Newspaper reporting of crime and justice: analysis of an assumed difference. *Journalism Quarterly*, Winter 1975, *52*, 731-734. (III-2)

Examines content of crime stories about the same event published the same day in 2 major New York City newspapers. Compared number of informational bits about the crime, the offender, and official actions, and total number of informational bits in the 2 papers.

387. MEYER, RONALD E., & COHEN, S. ALAN. A study of general reading compared to direct instruction to increase vocabulary achievement. *Reading World*, December 1975, *15*, 109-113. (V-6)

Compares vocabulary scores of 2 groups of fourth graders from a Title I population, one given intensive vocabulary training, the other assigned heavy tradebook reading for 5 months. All 130 subjects were below the 30th percentile on standardized tests.

388. MILLER, JOHN W. Disruptive effect: a phenomenon in oral reading. *Reading Horizons*, Summer 1975, *15*, 198-207. (IV-11)

Examines the effect of an unknown word on the oral reading of second graders. The 40 subjects were randomly assigned to read an unmodified or a modified version of a story in which word type and grammatical function were varied.

389. MILLER, LAWRENCE R. A direct comparison of the predictive capabilities of two cloze-derived readability formulas. *Psychological Reports*, December 1975, *37*, 1,207-1,211. (IV-19)

Uses 2 cloze-derived readability equations to estimate readability scores on the passages from which the equations were derived. Correlates scores predicted from the 2 equations on the same sets of passages.

390. MILLER, LAWRENCE R.; COLEMAN, EDMUND B.; & AQUINO, MILAGROS R. Correction to scores listed by Aquino (1969) for the Miller-Coleman readability scale, 2400-response condition. *Psychological Reports*, December 1975, *37*, 1,298. (IV-19)

Presents original and corrected cloze-derived readability scores for the 36 passages in a readability scale.

391. MILLER, WILMA H. Longitudinal study of home factors and reading achievement. *California Journal of Educational Research*, May 1975, *26*, 130-136. (IV-16)

Correlates reading achievement of 17 middle, 13 upper-lower, and 10 lower-class third graders with maternal language style, maternal teaching style, children's daily schedule, and home prereading activities which had been assessed when the children were in kindergarten.

392. MINSKOFF, ESTHER H. Research on psycholinguistic training: critique and guidelines. *Exceptional Children*, November 1975, *42*, 136-144. (I)

Questions the accuracy of conclusions drawn from a review of 39 studies on the effectiveness of "psycholinguistic" training. Presents subject, treatment, and design variables to be controlled in such studies.

393. MOLLOY, MICHAEL R. Content bias in adult reading materials. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 341-353. (I)

Integrates previous research findings with illustrative examples of bias in newspaper and magazine articles in the context of recommendations for teaching critical reading.

394. MOLOTCH, HARVEY, & LESTER, MARILYN. Accidental news: the great oil spill as local occurrence and national event. *American Journal of Sociology*, September 1975, *81*, 235-260. (III-2)

Examines the coverage given the Santa Barbara oil spill by a national sample of newspapers to determine the types of news subjects and activities which become widely publicized happenings. Implications of current methods of news gatekeeping for the maintenance of ideological domination are discussed.

395. MOORE, ROBERT B. *Two history texts: a study in contrast*. (A study plan and lesson guide). New York: The Racism and Sexism Resource Center. (III-2)

Reviews 2 textbooks on Mississippi history submitted for public school adoption. Analyzes content for ethnocentrism, racism, sexism, and other biases.

396. MORRIS, JUNE E. Adaptation of the Durrell Listening-Reading Series for use with the visually handicapped. *Education of the Visually Handicapped*, Spring 1976, *8*, 21-27. (VI)

Tests the validity of a braille and a large type edition of a reading-listening test. Subjects were 141 legally blind children able to read primer or higher level textbooks.

397. MORRISON, COLEMAN, & AUSTIN, MARY C. The torch lighters revisited—a preliminary report. *The Reading Teacher*, April 1976, *29*, 647-652. (II)

Reports questionnaire results from 161 colleges and universities (of 220 contacted) asked about implemented and planned changes in reading teacher training based upon a previous study.

398. MORRISON, DONALD W. The effects of anxiety and verbal motivational approaches on the reading performance of children. *Reading Improvement*, Fall 1974, *11 (2)*, 26-31. (IV-15)

Studies the reading achievement patterns of 152 fourth graders under conditions of anxiety involving the parent-child relationship.

399. MUGLESTON, WILLIAM T. The perils of southern publishing: a history of Uncle Remus's magazine. *Journalism Quarterly*, Autumn 1975, *52*, 515-521, 608. (III-8)

Details the growth, management, and eventual demise of *Uncle Remus's Magazine*.

400. MURDOCK, GRAHAM, & PHELPS, GUY. *Mass media and the secondary school*. Basingstoke and London: Macmillan Education, 1973. (III-1)

Examines how mass media impinges on the school situation, teachers' use and students' reactions to classroom use of mass media, and relationships among use of and attitudes toward the media. Surveys teachers and students in a representative sample of 100 English secondary schools.

401. MURRAY, D. J.; LEUNG, C.; & MCVIE, D. F. Vocalization, primary memory and secondary memory. *British Journal of Psychology*, August 1974, *65*, 403-413. (IV-5)

Reports 3 experiments investigating the relationships between oral reading and memory, using stories, high and low imagery value words, and tri-grams. Subjects were introductory psychology students, 8 or 10 in each of the 20 conditions.

402. MUSTAFFA-KEDAH, OMAR. The education of women in the Arab states. *Literacy Discussion*, Winter 1975-76, *6*, 119-139. (III-6)

Presents data on the ability of Arab men and women to read and write. Records the numbers of teachers and students involved in literacy programs in selected Arab countries. Outlines the literacy movements in the Arab world.

403. NAM, SUNWOO. Editorial decision-making in the United States: a comparison with the Japanese and Korean papers. *Gazette*, 1976, *22*, 90-105. (III-12)

Compares the results of a questionnaire survey of a return of 100 newspapers in the United States in mid-1971 with impressionistic findings from interviews with decision-makers of Japanese and Korean newspapers in January, 1971.

404. NAMENWIRTH, J. ZVI, & BIBBEE, RICHARD. Speech codes in the press. *Journal of Communication*, Spring 1975, *25*, 50-63. (III-2)

Tests the hypothesis that mass newspapers use a restricted code while prestige newspapers use an elaborated code. Analyzes content of a random sample of 288 editorials appearing in 6 American newspapers during 3 periods of the Korean War.

405. NASSER, MUNIR. Freedom's double edge: Arab press under Israeli occupation. *Journalism Quarterly*, Summer 1975, *52*, 207-212. (III-12)

Describes Arab newspapers that appeared during 1968-1973 and uses questionnaires, interviews, and translations of selected editorials to examine the propositions that freedom of the Arab press under occupation is relative and "controlled," serving both Israeli interests and the Arab population.

406. NELSON, DOUGLAS L.; BROOKS, DAVID H.; & BORDEN, RICHARD C. Effects of formal similarity: phonetic, graphic, or both? *Journal of Experimental Psychology*, July 1974, *103*, 91-96. (IV-5)

Describes a series of experiments using paired-associate word learning tasks designed to separate the effects of letter from sound similarity as a function of ordinal position of similarity and modality of presentation. A total of 400 introductory psychology students participated.

407. NELSON, ROSEMARY O., & WEIN, KENNETH S. Training letter discrimination by presentation of high-confusion versus low-confusion alternatives. *Journal of Educational Psychology*, December 1974, *66*, 926-931. (IV-6)

Uses match-to-sample tasks to teach preschoolers (N = 8 per group) letter discrimination. Compares groups trained on similar, dissimilar, and no-letters on trials to criterion and post test gains.

408. NEVILLE, MARY H. Effectiveness of rate of aural message on reading and listening. *Educational Research*, November 1975, *18*, 37-43. (IV-4)

Discusses the effect of aural pacing with a sample of 118 middle school children of normal reading ability and that of 18 remedial readers. Subjects' chronological age was 10 years 10 months to 11 years 9 months.

409. NEVILLE, MARY H., & PUGH, A. K. An empirical study of the reading while listening method. In Donald Moyle (Ed.) Reading: what of the future? *Eleventh annual conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 95-106. (V-6)

Reports 2 studies of the effect on cloze tested comprehension of a 7-week program in which 9-year-old children matched on reading ability and sex read material while listening to compressed (speeded) expanded (slowed), or no tape recorded versions of the same material.

410. NEVILLE, MARY H., & PUGH, A. K. An exploratory study of the application of time-compressed and time-expanded speech in the development of the English reading proficiency of foreign students. *English Language Teaching Journal*, July 1975, *29*, 320-329. (V-8)

Tests passage comprehension before and after subjects read passages while listening to speeded (compressed), normal, and slowed (expanded) tape recordings of the passages. Subjects were 7 overseas students attempting to improve their English.

411. NEWCOMER, PHYLLIS L. The ITPA and academic achievement. *Academic Therapy*, Summer 1975, *10*, 401-406. (I)

Reports conclusions based on a review of 28 studies correlating the ITPA subtests with indices of reading, spelling, and arithmetic.

412. NEWCOMER, PHYLLIS; LARSEN, STEPHEN; & HAMMILL, DONALD. A response. *Exceptional Children*, November 1975, *42*, 144-148. (I)

Points out that criticisms of the authors' review of psycholinguistic training efficacy studies apply to the studies rather than the review and, if appropriate, would mean even less support for positive findings than the little there was.

413. NICHOLLS, A. A second survey of reading tests used in schools. In Donald Moyle (Ed.) Reading: what of the future? *Eleventh annual conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 183-191. (V-2)

Compares teacher reported use of reading tests from surveys conducted in 1971 and 1974 in 90 and 95 schools respectively allocated for practice teaching to Teeside College of Education. Response rate was 51 and 63 respectively.

414. NICHOLS, JOHN SPICER. Increasing reader interest in foreign news content in newspapers: an experimental test. *Gazette*, 1975, *21*, 231-237. (III-4)

Tests an agenda setting hypothesis using interest rather than importance as the dependent variable. Subjects were 70 university dormitory residents who were sent a newspaper emphasizing foreign content, a newspaper without such emphasis, or no special newspaper for 2 weeks. They then ranked sample headlines in order of interest.

415. NIELSEN, RICHARD P., & NIELSEN, ANGELA B. A generalized media attitude model. *Journalism Quarterly*, Summer 1975, *52*, 225-228, 238. (III-15)

Correlates subjects' reported intentions to support, buy, read, or watch particular theatre companies, magazines, and television programs with their scores on a Likert attitude scale assessing values-beliefs, instrumentalities, and social sanctions. Subjects were 200 adults selected in a clustered random sample.

416. NISBET, JOHN; WELSH, JENNIFER; & WATT, JOYCE. Reading standards in Aberdeen 1962-72. *Educational Research*, June 1974, *16*, 172-175. (V-2)

Compares reading achievement of children tested in 1972 with that of children tested in 1962. Both surveys covered 99 per cent of 8- and 11-year-old pupils.

417. NOBER, LINDA W., & NOBER, E. HARRIS. Auditory discrimination of learning disabled children in quiet and classroom noise. *Journal of Learning Disabilities*, December 1975, *8*, 656-659. (IV-7)

Compares performance on a test of auditory discrimination by 20 learning disabled versus 20 normal children, ages 9 to 11, administered under quiet versus noise conditions.

418. NODINE, CALVIN F., & SIMMONS, FRANCINE G. Processing distinctive features in the differentiation of letterlike symbols. *Journal of Experimental Psychology*, July 1974, *103*, 21-28. (IV-6)

Compares eye movements of kindergarten and third grade subjects (N = 20) during matching tasks to assess processing strategies.

419. O'CONNELL, EDWARD J.; DUSEK, JEROME B.; & WHEELER, RICHARD J. A follow-up study of teacher expectancy effects. *Journal of Educational Psychology*, June 1974, *66*, 325-328. (IV-13)

Assesses the effect of attempts to bias teacher expectations and correlates teacher predictions of achievement with actual achievement measured the following year. Subjects were 22 third and 16 fifth graders.

420. OGAN, CHRISTINE; PLYMALE, IDA; SMITH, D. LYNN; TURPIN, WILLIAM H.; & SHAW, DONALD LEWIS. The changing front page of the New York *Times*, 1900-1970. *Journalism Quarterly*, Summer 1975, *52*, 340-344. (III-2)

Investigates in-depth coverage, news sources, and orientation to geographic area (local to "world") reflected in changes in *The New York Times* front page news coverage over the past 7 decades.

421. OGDEN, WILLIAM R. Secondary school chemistry teaching, 1918-1972: Objectives as stated in periodical literature. *Journal of Research in Science Teaching*, July 1975, *12*, 235-246. (III-2)

Divides a 54-year period into 6 sub-periods, categorizes statements of objectives into 4 classes, and tabulates statements into 18 sub-classes with respect to frequency of occurrence, authorship, and year of publication within each sub-period and across all sub-periods.

422. OHNMACHT, FRED W., & FLEMING, JAMES T. Developmental changes in memory attributes of good and poor readers. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 255-262. (IV-5)

Investigates relative dominance of word association and acoustic similarity on memory errors. Subjects were 10 good and 10 poor readers from both second and sixth grade asked to remember words and select them from among 3 distractors.

423. OHNMACHT, SANDRA R., & OHNMACHT, FRED W. Reading ability as a mediator of the effects of semantic features on short term memory for words. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 280-284. (IV-9)

Analyzes relationships among reading ability, delay/no delay prior to recall task, and abrupt shift in type of words to be recalled from a word list. Subjects were 56 good and poor readers in second grade.

424. OLIVER, MARVIN E. The development of language concepts of pre-primary Indian children. *Language Arts* (formerly Elementary English) September 1975, *52*, 865-869. (IV-8)

Interviews 78 children, ages 3 to 5, on naming and recognizing letters, counting, and their concepts of words, reading, and writing.

425. OLLILA, L. O., & CHAMBERLAIN, L. A. The effect of noise and object on acquisition of a sight vocabulary in kindergarten children. *The Alberta Journal of Educational Research*, September 1975, *21*, 213-219. (IV-9)

Investigates the relationship of classroom noise, presentation method, and sex to rate of sight word learning. Subjects were 120 kindergartners randomly assigned within sex to noise/no noise, and word alone/word and picture presentation of 4 words.

426. ORLOW, MARIA. Literacy training in West Germany and the United States. *The Reading Teacher*, February 1976, *29*, 460-467. (I)

Discusses similarities and differences in educational policies, procedures, and achievement in German and American school systems.

427. OSGOOD, CHARLES E., & HOOSAIN, RUMJAHN. Salience of the word as a unit in the perception of language. *Perception and Psychophysics*, February 1974, *15*, 168-192. (IV-8)

Reports the results of 7 experiments which compared both guessing and recognition thresholds for words with thresholds for linguistic units both smaller and larger than a word.

428. PALMATIER, ROBERT A. & BENNETT, J. MICHAEL. Notetaking habits of college students. *Journal of Reading*, December 1974, *18*, 215-218. (IV-13)

Compares notetaking reported by A-B and B-C college students enrolled in reading courses (N = 233).

429. PALMER, JEAN. The teaching of reading to deaf children—a research report. In Donald Moyle (Ed.) Reading: what of the future? *Eleventh annual conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 222-228. (VI)

Compares reading attainment of deaf children after 3 years of systematic instruction using i.t.a. (N = 68), or T.O. (N = 69), or typical methods (N = 70) using with deaf children.

430. PARK, GEORGE E., & SCHNEIDER, KENNETH A. Thyroid function in relation to dyslexia (reading failures). *Journal of Reading Behavior*, Summer 1975, *7*, 197-199. (IV-14)

Compares serum total thyroxine measured in 47 boys and 6 girls reading at least 1½ grades below expectancy with that of 18 boys of similar age nominated as reading at their mental level.

431. PASQUA, TOM; RAYFIELD, ROBERT; & SHOWALTER, STUART. Automated indexing for newspapers: two suggested approaches. *Journalism Quarterly*, Summer 1975, *52*, 291-296. (III-15)

Applies 2 computerized searching techniques to 29 stories randomly selected from 1 week's edition of the University of Texas student newspaper.

432. PAVLIK, ROBERT A. An assessment of undergraduate preparation available at the University of Northern Colorado for the teaching of reading in the elementary school. *Colorado Journal of Educational Research*, Spring 1975, *14*, 22-28. (II)

Uses interviews, Q-sort technique, and questionnaires to compare emphasis on reading instruction concepts given by 3 reading professors, 111 (33 per cent) of their former students, and the students' principals or supervisors.

433. PEEL, E. A. Predilection for generalising and abstracting. *British Journal of Educational Psychology*, June 1975, *45*, 177-188. (IV-3)

Uses a sentence preference test containing terms expressing particular, general, and abstract notions in a study of cognitive development in 11 to 16 year olds. Validity criteria included measures of reading, writing, language, and verbal ability as well as age differences.

434. PENISTON, EUGENE. Developing reading skills for low socio economic status first grade pupils. *Reading Improvement*, Summer 1975, *12*, 98-102. (V-5)

Compares changes in reading achievement of 30 normal first graders after 36 weeks of programed or individualized reading instruction. The randomly assigned subjects were selected from 1 lower and 1 middleclass school.

435. PERETTI, PETER O., & LUCAS, CHRIS. Newspaper advertising influences on consumers' behavior by socioeconomic status of customers. *Psychological Reports*, December 1975, *37*, 693-694. (III-14)

Relates shoppers' purchases of advertised food items to their report of reading the ads. Subjects were 71 middleclass and 71 lowerclass customers in a small (3,000) town questioned by store clerks as they came through the check-out counter.

436. PERLOFF, RICHARD M. Journalism research: a 20-year perspective. *Journalism Quarterly*, Spring 1976, *53*, 123-126. (III-2)

Examines trends in number of articles published in the *Journalism Quarterly* from 1955 to 1975, in percentage of studies of electronic versus print media, and in authors' professional field.

437. PETERS, CHARLES W. The effect of systematic restructuring of material upon the comprehension process. *Reading Research Quarterly*, 1975-1976, *11* (*1*), 87-111. (IV-5)

Uses 6 variations of social studies materials to determine the most effective ordering of concept presentation. Subjects were 360 ninth graders with equal numbers of good and poor readers assigned to each group.

438. PETERS, CHARLES W.; PETERS, NATHANIEL A.; & KAUFMAN, B. DARWIN. A comparative analysis of reading comprehension in four-content areas. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 200-206. (IV-10)

Uses multiple regression to determine the best predictor of standardized reading achievement scores from a specially constructed 135-item test of reading skills required in math, history, English, and science. Subjects were 663 eighth graders.

439. PIETILA, VEIKKO. *People's conceptions of the mass media.* (Research Report B) Tampere, Finland: Research Institute of the University of Tampere, 1971. (III-1)

Studies conception of Finnish people as to the significance of mass media and their functions before and after the introduction of television.

440. PLATT, GERALD. The work and value of an LEA reading centre. In William Latham (Ed.) The road to effective reading. *Tenth annual study conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 98-102. (II)

Examines the possible effect of in-service training on variables such as children's preprogram and post program reading test results, children's and teachers' attitudes, and questionnaire reported classroom teaching practices. Subjects were 18 "trained" and 18 similar "control" teachers.

441. POLK, LESLIE D.; EDDY, JOHN; & ANDRE, ANN. Use of congressional publicity in Wisconsin District. *Journalism Quarterly*, Autumn 1975, *52*, 543-546. (III-14)

Examines effectiveness of press releases by members of congress. Compares press releases with news covered in a sample of 50 weekly newspapers in Wisconsin's Third Congressional District.

442. POUND, LARRY D., & BAILEY, GERALD DOUGLASS. Immediate feedback less effective than delayed feedback for contextual learning? *Reading Improvement*, Winter 1975, *12*, 222-224. (I)

Discusses research on retention of classroom type of verbal materials in which the interval between students' responses and feedback was varied.

443. PRASAD, C. The farmers' functional literacy programme. *Literacy Discussion*, Autumn 1975, *6*, 43-58. (III-6)

Describes the population in India, the Farmers' Functional Literacy Project, and results so far in terms of facilities, reading skills, attitudes, and applications to agricultural practices.

444. PRENDERGAST, MARY A., & BINDER, DOROTHY M. Relationships of selected self-concept and academic achievement measures. *Measurement and Evaluation in Guidance*, July 1975, *8*, 92-95. (IV-15)

Reports correlations between 3 measures of self concept and their correlations with reading and mathematics achievement scores. Subjects were 366 ninth graders.

445. PROCIUK, TERRY J., & BREEN, LAWRENCE J. Locus of control, study habits and attitudes, and college academic performance. *The Journal of Psychology*, September 1974, *88*, 91-95. (IV-15)

Reports correlations among measures of locus of control, study habits and attitudes, and GPA from 89 psychology students.

446. PULFORD, D. LYNN. Follow-up of study of science news accuracy. *Journalism Quarterly*, Spring 1976, *53*, 119-121. (III-13)

Investigates the relationship of number and seriousness of errors found in science news to number of possible errors listed in the questionnaires used. A sample of 143 articles were rated by the principal source cited in the story.

447. PUMFREY, PETER D. The Illinois Test of Psycholinguistic Abilities in the diagnosis and remediation of reading failure. In Donald Moyle (Ed.) Reading: what of the future? *Eleventh annual conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 192-204. (IV-14)

Correlates 15 psycholinguistic variables with reading attainment in 152 typical first year juniors; compares psycholinguistic ability patterns of 48 8-year-old poor readers with the standardization sample; and compares the effects of 3 intervention programs on psycholinguistic ability patterns and reading attainment of 7-year-old poor readers, total N = 60.

448. PYRCZAK, FRED. A responsive note on measures of the passage dependence of reading comprehension test items. *Reading Research Quarterly*, 1975-1976, *11* (*1*) 112-117. (V-12)

Explicates the definitions underlying 2 indices of passage dependence of test items. Discusses implications for the use of each, especially for test construction.

449. QUIRK, THOMAS J.; TRISMEN, DONALD A.; WEINBERG, SUSAN F.; & NALIN, KATHERINE B. Attending behavior during reading instruction. *The Reading Teacher*, April 1976, *29*, 640-646. (V-1)

Reports teacher and pupil behavior during reading instruction. Twenty-seven trained people coded proportion and type of behavior observed in a total of 63 second, fourth, and eighth grade classes on 9 separate days.

450. RALLS, ELIZABETH M., & FRY, MAURINE A. Simultaneous and successive discrimination of similar letters: comparison of training techniques and transfer effects. *The Journal of Psychology*, July 1975, *90*, 171-177. (IV-6)

Analyzes the effects of orientation pretraining versus no pretraining, simultaneous versus successive stimuli presentation, and reversible versus dissimilar letters on learning and transferring training in letter discrimination. Subjects were 64 kindergarteners.

451. RAMANAIAH, NERELLA V.; RIBICH, FRED D.; & SCHMECK, RONALD R. Internal external control of reinforcement as a determinant of study habits and academic attitudes. *Journal of Research in Personality*, December 1975, 9, 375-384. (IV-15)

Analyzes the relationships among locus of control, study habits, and attitudes. Subjects were 123 male and 130 female introductory psychology students.

452. RAMIG, CHRISTOPHER J., & DULIN, KENNETH L. A one-year reading methods seminar for adult basic education teachers. In George H. McNinch and Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. 137-142. (II)

Describes a program to upgrade skills of adult reading teachers. Analyzes the teachers' evaluation of the course and its components.

453. RAMSDELL, ELIZABETH A., & GAIER, EUGENE L. Identity and reality reflected in adolescent fiction: the early sixties and the early seventies. *Adolescence*, Winter 1974, 9, 577-591. (III-2)

Compares content analyses of short stories published in 1962 and 1971 in a magazine for teenage girls.

454. RAMSEY, WALLACE. Testing phonics skills in context. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 263-266. (V-12)

Compares results on 3 types of widely-used phonics test with those obtained on a test of ability to apply phonics knowledge to decode unknown words appearing in meaningful context. Subjects were 138 second graders reading below average.

455. RANKIN, EARL F., & BRYANT, PAULINE G. Use of prediction equations and computer simulation for identifying preferred sensory modality for training in reading. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 182-192. (V-12)

Validates a test battery predicting students' most effective learning modality on 108 low-achieving inner-city third graders. Three teachers in 3 schools were randomly assigned to visual, auditory or kinesthetic emphasis in instruction.

456. RAVEN, RONALD J.; HANNAH, ARTHUR J.; & DORAN, RODNEY. Relationships of Piaget's logical operations with science achievement and related aptitudes in black college students. *Science Education*, October-December 1974. *58*, 561-568. (IV-3)

Uses multiple correlation to investigate relationships among performance on standardized achievement tests of reading, physical and biological science, and tests of logical and critical reasoning. Subjects were black first year college students, 97 females and 26 males.

457. RAYBORN, KAY G., & THOMPSON, LONDON J. The effect of introductory courses in the teaching of reading on college students' ability to read. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. 130-134. (II)

Investigates incidental learning and transfer of training in reading skills in 183 education majors taking a reading methodology course. Criteria were pretest and post test reading achievement scores.

458. REAL, MICHAEL R. Trends in structure and policy in the American Catholic press. *Journalism Quarterly*, Summer 1975, *52*, 265-271. (III-8)

Analyzes data from interviews with Catholic-interest journalists, and monitoring of selected Catholic publications over the last decade, and synthesized recently available historical data in terms of libertarian to authoritarian policy and independent to institutional structure.

459. RECHT, DONNA R. The self-correction process in reading. *The Reading Teacher*, April 1976, *29*, 632-636. (IV-11)

Analyzes successfully corrected miscues in oral reading of 47 children in grades 2, 3, 4, and 6. Compares them with the child's comprehension assessed by cloze test on the same material, grade level, reading ability, and total number of miscues.

460. RICH, ANITA, & BERNSTEIN, JOANNE E. The picture book image of entering school. *Language Arts*, October 1975, *52*, 978-982. (III-2)

Analyzes 30 picture books portraying children's feelings and experiences as they begin school.

461. RICHARDS, C. STEVEN. Behavior modification of studying through study skills advice and self-control procedures. *Journal of Counseling Psychology*, September 1975, *22*, 431-436. (V-8)

Uses introductory psychology final examination score as criterion in a between subjects (N = 108) pyramid design to investigate the relative efficiency of study behaviors questionnaires and of handouts describing SQ3R singly and in combination with other optional studying conditions and/or self-reporting graphs. Eighteen non-volunteers served as no-contact controls.

462. RICHARDSON, JOHN T. E. The effect of word imageability in acquired dyslexia. *Neuropsychologia*, September 1975, *13*, 281-288. (VI)

Correlates word recognition (160 words) with word attributes (length, frequency, and ratings of imageability, concreteness, and meaningfulness). Subject has been traumatically brain damaged (bullet wound) in 1944 when he was 20 years old.

463. RICKARDS, JOHN P., & AUGUST, GERALD J. Generative underlining strategies in prose recall. *Journal of Educational Psychology*, December 1975, *67*, 860-865. (IV-5)

Compares text recall of 6 groups given a passage that was experimenter-underlined, non-underlined without underlining instructions or with instructions to underline the most important, least important, or any 1 sentence per paragraph. Subjects were 90 randomly assigned introductory educational psychology students.

464. RIE, HERBERT E.; RIE, ELLEN D.; STEWART, SANDRA; & AMBUEL, PHILIP. Effects of ritalin on underachieving children: a replication. *American Journal of Orthopsychiatry*, April 1976, *46*, 313-322. (IV-1)

Replicates a double-blind, counterbalanced design investigating the relationship of ritalin versus placebo to standardized academic achievement and other tested and rated variables. Subjects were 14 male and 4 female retarded readers aged 6 to 10 assessed initially, at 15 weeks (treatments cross-over), and at 30 weeks (end of treatments).

465. RINSKY, LEE ANN. A, E, I, O, U, but also OO. *The Reading Teacher*, November 1975, *29*, 146-149. (V-9)

Notes that basal and phonics workbooks confuse the sounds of o͞o as in rude and ū as in fuse. Analyzes contexts in which the letter *u* represents both long vowel sounds to learn what determines which of these sounds occurs.

466. RITTER, DAVID R., & SABATINO, DAVID A. The effects of method of measurement upon children's performance on visual perceptual tasks. *Journal of School Psychology*, Winter 1974, *12*, 296-304. (IV-6)

Uses multi-trait (figure-ground perception and form discrimination), multi-method (naming and recognition of stimuli presented tachistoscopically and untimed) matrix analysis to determine the contribution of trait and method to test scores of 64 first graders with average or above intelligence.

467. ROBINSON, HELEN M., & WEINTRAUB, SAMUEL. Research related to children's interests and to developmental values of reading. *Library Trends*, October 1973, *22*, 81-108. (I)

Discusses research techniques and findings in studies of interests and developmental values of reading from preschool to high school.

468. RODGERS, D.; SLADE, K.; & CONRY, R. Oral language, reading ability, and socioeconomic background in three grade one classes. *The Alberta Journal of Educational Research*, December 1974, *20*, 316-326. (IV-8)

Uses cluster analysis of measures of vocabulary, fluency, and completions of sentence stems containing a connective to differentiate high, middle, and low income first graders (N = 105). Uses second grade reading achievement to assess predictive validity of language competence.

469. RODRIGUEZ T., NELSON, & HANSEN, LEE H. Performance of readability formulas under conditions of restricted ability level and restricted difficulty of materials. *Journal of Experimental Education*, Fall 1975, *44*, 8-14. (V-9)

Compares the ability of 4 formulas to predict mean cloze scores on a variety of seventh grade materials. Validity and cross validity data on a large number of seventh graders originated from a literacy assessment project.

470. ROETTGER, DORIS. Effects of early intervention programs. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 464-471. (I)

Describes several curriculum models for early intervention programs, identifies variations among them, and summarizes studies of their effectiveness. Preschool programs were categorized as structured cognitive, programed or academic skills model, structured environment, and child-centered.

471. ROGERS, JANETTE STATON. Reading practices in open education. *The Reading Teacher*, March 1976, *29*, 548-554. (I)

Summarizes results of several studies on reading achievement or instructional practices in open classrooms.

472. ROPER, BURNS W. *Trends in attitudes toward television and other media: a sixteen-year review, 1959-1974*. New York: Television Information Office, April 1975. (III-1)

Interviews a multi-staged, stratified, area probability sample of the non-institutionalized adult population of the U.S. (N = 1,995) regarding opinion toward and attitudes about newspapers, magazines, radio, and television.

473. ROSEN, ELLEN. Readability analysis of SRA power builders. *Journal of Reading*, April 1976, *19*, 548-551. (V-9)

Compares average formula estimated readability scores with publisher-determined grade levels on a series of literacy building materials.

474. ROTHKOPF, E. Z., & BILLINGTON, M. J. Relevance and similarity of text elements to descriptions of learning goals. *Journal of Educational Psychology*, December 1975, *67*, 745-750. (IV-5)

Varies number of objectives and resemblance between wording of text and objectives in a study of direct and incidental learning. Subjects were 192 paid college students randomly divided among 8 experimental conditions involving recall of a 1,010-word passage.

475. ROTHKOPF, E. Z., & BILLINGTON, M. J. A two-factor model of the effect of goal-descriptive directions on learning from text. *Journal of Educational Psychology*, October 1975, *67*, 692-704. (IV-5)

Varies objectives and relevance of test items on a 6,000-word passage to assess the influence of goals on directed and incidental learning. Subjects were 138 college students in a communications course.

476. ROURKE, B. P., & FINLAYSON, M. A. J. Neuropsychological significance of variations in patterns of performance on the trail making test for older children with learning disabilities. *Journal of Abnormal Psychology*, August 1975, *84*, 412-421. (IV-14)

Analyzes results of a battery of psychological tests administered to 45 learning disabled children ages 10 to 14 selected for their performance on a paper and pencil test associated with brain damage.

477. ROURKE, BYRON P. Brain-behavior relationships in children with learning disabilities. *American Psychologist*, September 1975, *30*, 911-920. (I)

Investigates pathognomic signs of learning disability, such as reaction time and differential psychomotor/verbal scores, in a series of studies of electroencephalogram correlates. Compares normal and brain damaged children and adults to subjects for whom all primary etiological factors except cerebral dysfunction had been ruled out.

478. ROWELL, E. H. Do elementary students read better orally or silently? *The Reading Teacher*, January 1976, *29*, 367-370. (IV-11)

Compares silent and oral reading comprehension measured by a standardized individual test. Subjects were 240 third and fifth graders selected to include equal numbers of boys and girls, from high and low socioeconomic levels, and from rural, urban, and suburban schools.

479. ROYER, JAMES M., & SCHUMER, HARRY. Reading achievement gains as a function of teacher predictions. *The Journal of Educational Research*, February 1976, *69*, 232-235. (II)

Compares remedial reading student gains from 1970-1973 when teachers made grade equivalent predictions (N = 338) with those from 1967-1970 when teachers had not made predictions. Teachers were 5 reading specialists teaching small groups of students in 4 schools.

480. RUDEL, RITA G., & DENCKLA, MARTHA B. Relationship of IQ and reading score to visual, spatial, and temporal matching tasks. *Journal of Learning Disabilities*, March 1976, *9*, 169-178. (IV-4)

Uses visual stimuli presented via different modes to test the pattern matching ability of 51 normal and 23 learning disabled children, ages 7 to 12, relative to IQ and oral reading grade level.

481. RUGGIERI, ELAINE J., & PURNELL, RICHARD. A comparison of a standardized test and a graded word list test as indicators of reading level for remedial program referrals. *The New England Reading Association Journal*, 1976, *11* (*2*), 24-27, 53-56. (IV-13)

Uses informal reading inventory performance as criterion for reading level. Correlates scores from the IRI, a word recognition test, and a group test administered to 46 referrals to a remedial reading program, ages 6 to 13.

482. RUTKOWSKI, KATHLEEN, & DOMINO, GEORGE. Interrelationship of study skills and personality variables in college students. *Journal of Educational Psychology*, December 1975, *67*, 784-789. (IV-15)

Examines relationships among tests of academic achievement, study habits and attitudes, and personality using correlational techniques, contrasted groups, and factor analyses. Subjects were 133 female and 68 male first year college students.

483. RYAN, MICHAEL. A factor analytic study of scientists' responses to errors. *Journalism Quarterly*, Summer 1975, *52*, 333-336. (III-13)

Uses questionnaire data collected previously from 193 scientists cited as major sources in science news stories. Reports factor leadings of 42 types of errors originally categorized as deviations from objective fact or mistakes of judgment.

484. SACHSMAN, DAVID B. Public relations influence on coverage of environment in San Francisco area. *Journalism Quarterly*, Spring 1976, *53*, 54-60. (III-1)

Investigates the relationship of newspaper, radio, and television stores about the environment to relevant press releases received by a purposive sample of 11 Bay area journalists.

485. SAILOR, A. LOUISE, & BALL, STEVE E. Peripheral vision training in reading speed and comprehension. *Perceptual and Motor Skills*, December 1975, *41*, 761-762. (IV-12)

Compares the effect on reading rate and comprehension of combined speed-reading and peripheral vision training with reading training only. The 16 subjects were randomly selected from college students taking speed reading, matched on IQ and randomly assigned to one of the 2 treatments.

486. SAMUELS, S. JAY; BEGY, GERALD; & CHEN, CHAUR CHING. Comparison of word recognition speed and strategies of less skilled and more highly skilled readers. *Reading Research Quarterly*, 1975-1976, *11* (*1*), 72-86. (IV-9)

Investigates an hypothesis-test model of word recognition. Compares speed of 20 good and 20 poor fourth graders' identification of whole or partially presented familiar words. Compares 20 undergraduates with 20 fourth graders on speed of letter identification and awareness of errors made.

487. SAMUELS, S. JAY; DAHL, PATRICIA; & ARCHWAMETY, TEARA. Effect of hypothesis/test training on reading skill. *Journal of Educational Psychology*, December 1974, *66*, 835-844. (IV-9)

Determines components of a psycholinguistic model of word recognition through task analysis. Uses 60 mentally retarded children (mean age 10) and 36 third grade normals to compare randomly assigned experimental (subskill training) and control (regular reading instruction) groups on identifying words tachistoscopically, in context and on cloze tasks.

488. SCHAER, HILDEGARD F., & CRUMP, DONALD. Teacher involvement and early identification of children with learning dis-

abilities. *Journal of Learning Disabilities*, February 1976, *9*, 91-95. (I)

Reviews programs geared to early intervention, after identification of learning disabilities. Makes recommendations.

489. SCHAFER, PAUL J. The readability of the Newbery Medal books. *Language Arts*, May 1976, *53*, 557-559. (III-10)

Determines the minimum reading-grade level of the award books from 1940-1973. Assesses readability using the Botel Predicting Readability Levels and the Fry Formula. Groups the books by average grade reading level.

490. SCHREINER, ROBERT, & TANNER, LINDA R. What history says about teaching reading. *The Reading Teacher*, February 1976, *29*, 468-473. (I)

Reviews developments in reading instruction and assessment indicated in publications from 1870 to 1974.

491. SCHUMACHER, GARY M.; LIEBERT, DALE; & FASS, WARREN. Textual organization, advance organizers and the retention of prose material. *Journal of Reading Behavior*, Summer 1975, *7*, 172-180. (IV-5)

Uses 1 long or 6 short paragraphs presented to 144 college students with or without descriptions of text organization to study the interaction of passage structure and advance organizers.

492. SCHWARTZ, JUDY IRIS. An investigation of attitudes on the use of black dialect materials for beginning reading instruction. *Research in the Teaching of English*, Fall 1975, *9* (2), 200-209. (II)

Investigates the attitudes of 69 people categorized by occupation, race, and socioeconomic status toward using black dialect materials to teach reading. Two blacks and 1 white conducted the interviews.

493. SCHWEITZER, JOHN C., & GOLDMAN, ELAINE. Does newspaper competition make a difference to readers? *Journalism Quarterly*, Winter 1975, *52*, 706-710. (III-13)

Replicates, in part, an earlier study which examined newspaper content under intense competition and no competition conditions. Also explores consumer perception of newspaper content in the presence or absence of competition.

494. SCRANTON, THOMAS R., & DOWNS, MARY LOU. Elementary and secondary learning disabilities programs in the U.S.: a survey. *Journal of Learning Disabilities*, June/July 1975, *8*, 394-399. (V-1)

Reports numbers of learning disability programs in all 50 states and opinions offered by special education sections of each state department of education as to reasons for differences between numbers of programs in elementary and secondary schools.

495. SEMEL, ELEANOR M., & WIIG, ELISABETH H. Comprehension of syntactic structures and critical verbal elements by children with learning disabilities. *Journal of Learning Disabilities*, January 1975, *8*, 53-58. (IV-8)

Analyzes the performance of 18 younger (ages 7 to 9) and 16 older (ages 9 to 11) learning disabled children on receptive and expressive language tests compared to norms and to a matched group of 17 achieving children.

496. SEWELL, TREVOR E., & SEVERSON, ROGER A. Learning ability and intelligence as cognitive predictors of achievement in first-grade black children. *Journal of Educational Psychology*, December 1974, *66*, 948-955. (IV-3)

Examines relationships of reading and arithmetic achievement to 3 types of teaching/learning: picture analogies, whole words, and paired associate (picture-word). Subjects were 62 black first graders taught and tested by a black examiner.

497. SHAMO, G. WAYNE. Predicting syllable count by computer. *Journalism Quarterly*, Summer 1975, *52*, 344-346. (III-3)

Analyzes 81 language samples using a computer program to count total vowels, words, and characters per selection. Correlates man-made syllable counts with these variables and determines the best predictor from regression analysis.

498. SHELDON, WILLIAM D.; LASHINGER, DONALD R.; TROIKE, DOROTHY R.; & MERCER, LYNN E. A summary of research studies relating to language arts in elementary education: 1974. *Language Arts*, January 1976, *53*, 85-110. (I)

Summarizes 129 publications under IQ headings—including research summaries and listings, written communication, beginning reading instruction, reading achievement and some correlates, and special problems and reading.

499. SHEPARD, LESLIE. *The history of street literature.* Detroit, Mich.: Singing Tree Press, 1973. (III-8)

Discusses the relationship between ballads, proclamations, and other street literature and the modern mass media in a survey of such publications. Includes first hand examples or facsimilies of such documents.

500. SHERIDAN, E. MARCIA. Sex differences and reading. *Annotated bibliography series*. Newark, Delaware: International Reading Association, 1976. (I)

Annotates 154 published and unpublished reports categorized under headings such as achievement, reading methods and materials, treatment of boys and girls, and interest and attitude.

501. SHRAUGER, VIRGINIA MOORE. Personalizing reading instruction in the conventional classroom. In Gene Kerstiens (Ed.) *Proceedings of the Seventh Annual Conference of the Western College Reading Association*. Volume VII: Reading update: Ideals to reality, 1974. Pp. 159-164. (V-8)

Describes the generation, implementation, and results of a personalized reading program, one operating in a conventional college classroom and intended to create opportunities for students to learn how to learn, to direct their own learning, and to improve their reading and vocabulary skills.

502. SIDMAN, MURRAY, & KIRK, BARBARA. Letter reversals in naming, writing, and matching to sample. *Child Development*, September 1974, *45*, 616-625. (IV-14)

Discusses implications of weekly testing for reversal errors in 15 children with reading problems, ages 7-9 to 14-7. Several modes of letter presentation and response were used over the 38 weeks.

503. SIMMS, RICHARD L. Bias in textbooks: not yet corrected. *Phi Delta Kappan*, November 1975, *57*, 201-202. (I)

Discusses findings from a review of American history textbooks on the official state of Texas adoption list which are in use in the fifth and eighth grades in Texas schools and the nation. Assesses coverage of blacks, Mexican-Americans, and native Americans.

504. SIMONS, HERBERT D. Transformational phonology and reading acquisition. *Journal of Reading Behavior*, Spring 1975, *7*, 49-59. (IV-8)

Tests the hypothesis that English spelling correspondences represent lexical abstractions by comparing the performance of 87 above and below average readers in second and third grades on learning and memory of word pairs that were or were not morphologically related, all pairs having spelling similarities.

505. SINATRA, RICHARD C. Language experience in Title I summer camping problems. *Reading Improvement*, Fall 1975, *12*, 148-156. (V-11)

Describes the integration of specific reading vocabulary with outdoor physical activities in reading programs attended by 1,017 black children with severe reading deficits who had completed grades 1 through 8. Evaluates improvement by comparison of preprogram and post program word recognition test results.

506. SINGER, HARRY. The seer technique: a non-computational procedure for quickly estimating readability level. *Journal of Reading Behavior*, Fall 1975, *7*, 255-267. (IV-19)

Reports readability estimates for paragraphs from children's literature made by 32 college students, comparing the unknown paragraphs with either of 2 sets of standard paragraphs, one from a diagnostic test and the other from children's literature on which readability level had been calculated. Provides all paragraphs from children's literature with their readability levels.

507. SINGLETARY, MICHAEL W. Newspaper use of supplemental services: 1960-73. *Journalism Quarterly*, Winter 1975, *52*, 748-751. (III-11)

Analyzes previously published data based on voluntary reports by publishers in 7 circulation groups to investigate trends in newspaper use of wire services.

508. SMITH, A. C. H. (with Elizabeth Immirzi and Trevor Blackwell). *Paper voices: the popular press and social change 1935-1965*. Totowa, New Jersey: Rowman and Littlefield, 1975. (III-12)

Examines how the British popular press interprets social change to its readers. Explores and develops methods of close analysis as a contribution to the general field of cultural studies. Bases the comparison on issues of the *Daily Express* and the *Daily Mirror*.

509. SMITH, ARTHUR DE W. Reading skills—what reading skills? In John E. Merritt (Ed.) New horizons in reading, *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 39-48. (I)

Reports findings from 2 surveys of a total of 830 workers and their 820 supervisors in 46 different occupations on required communications skills, such as percentage of occupations using reading and writing memos, manuals, and letters.

510. SMITH, GUY D.; ENRIGHT, GWYN; & DEVIRIAN, MARGARET. A national survey of learning and study skills programs. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 67-73. (V-1)

Surveys all accredited colleges and universities regarding "learning center" administration, budget, staffing, services, facilities, and materials. Return rate was 38 per cent (1,258).

511. SMITH, KENNETH J. A combination of strategies for decoding. In Malcolm P. Douglass (Ed.) Reading between and beyond the lines. *Claremont Reading Conference 37th Yearbook*, 1973. Pp. 148-155. (IV-9)

Uses graduate students' cloze performance on tasks with varied letter clues to determine the degree to which sufficient information is available for decoding.

512. SMITH, LAWRENCE L. Comparing reading expectancy sets as determined from selected intelligence measures. *Reading Improvement*, Winter 1975, *12*, 212-219. (IV-3)

Uses 4 screening tests to estimate reading ability of a sample of 20 boys and 20 girls from each of second, fourth, and sixth grades. Compares these estimates with expectancy based on a psychologist administered performance test.

513. SMITH, LEWIS B. They found a golden ladder . . . stories by children. *The Reading Teacher*, March 1976, *29*, 541-545. (V-5)

Describes a system-wide program involving tape recording and typing children's dictation. Reports actual reading achievement and intelligence test scores of 367 first and 351 second graders contrasted with expected scores.

514. SMITH, M. DWAYNE, & MATRE, MARC. Social norms and sex roles in romance and adventure magazines. *Journalism Quarterly*, Summer 1975, *52*, 309-315. (III-2)

Samples 75 stories from 16 female and 14 male oriented magazines. Analyzes content regarding such things as attitudes toward sex, marriage, and stern punishment for illegal acts.

515. SMITH, R. KENT; DRUMMOND, ROBERT J.; & PINETTE, CLAYTON A. Reading attitudes and interests: their importance in community college reading instruction. *Reading World*, October 1975, *15*, 38-44. (IV-18)

Compares self-reported reading attitudes-interests and knowledge of reading techniques of 31 students taking a community college reading course with those of 30 students taking a regular academic course.

516. SODERLUND, WALTER C., & WAGENBERG, RONALD H. A content analysis of editorial coverage of the 1972 election campaigns in Canada and the United States. *The Western Political Quarterly*, March 1975, *28*, 85-107. (III-2)

Examines the state of relations and the political systems of 2 neighboring countries by comparing, along 3 major dimensions, newspaper editorials dealing with electoral issues during concurrent federal elections.

517. SOHN, ARDYTH BROADRICK. Determining guilt or innocence of accused from pretrial news stories. *Journalism Quarterly*, Spring 1976, *53*, 100-105. (III-13)

Uses Q-sorting of 48 experimentally designed news stories to study how newspaper readers relate typical crime story elements to assessment of guilt or innocence of accused persons. Subjects were 24 adults conforming to demographic characteristics of juries.

518. SPEER, OLGA B., & LAMB, GEORGE S. First grade reading ability and fluency in naming verbal symbols. *The Reading Teacher*, March 1976, *29*, 572-576. (IV-6)

Attempts to predict year end reading achievement from speed of identifying letters and syllables and gains in such identification after practice in October and April. Subjects were 25 first graders.

519. SPOONCER, FRANK. Hanging out the 'cloze' line. *Reading*, June 1974, *8*, 19-26. (V-12)

Compares cloze, standardized reading, and intelligence test results from streamed (N, 35, 33) and unstreamed (N 66) fourth year junior students.

520. SPRING, CARL. Naming speed as a correlate of reading ability and sex. *Perceptual and Motor Skills*, August 1975, *41*, 134. (IV-13)

Assesses the validity of digit-naming speed in first graders for predicting reading achievement measured 5 months later. Subjects were 20 boys and 24 girls.

521. SPRING, KAREN STROM. How much do community college students learn from their textbooks? *Journal of Reading*, November 1975, *19*, 131-136. (V-8)

Uses readability estimates, cloze tests, teacher evaluations of students, and questionnaires from 154 students to investigate objective and subjective difficulty levels of 6 textbooks and where students say they get their information.

522. STANLEY, GORDON; KAPLAN, IDA; & POOLE, CHARLES. Cognitive and nonverbal perceptual processing in dyslexics. *The Journal of General Psychology*, July 1975, *93*, 67-72. (IV-6)

Compares 33 dyslexics and 33 controls on tasks involving visual matching with spatial transformation, tactual serial matching, visual sequential memory, and auditory sequential memory. Subjects were 8 to 12 year olds in Melbourne suburban schools.

523. STANTON, H. E. Music and test anxiety: further evidence for an interaction. *British Journal of Educational Psychology*, February 1975, *45*, 80-82. (IV-15)

Analyzes comprehension scores of high, average, and low test anxious college students (N = 162) after studying a 1,500-word passage under one of 3 conditions: silence, music on entry, music throughout.

524. STEIN, ELISABETH M.; BALL, HANCEL E., JR.; CONN, GEORGE T.; HARAN, JUDY; & STRIZVER, GERALD L. A contingency management day program for adolescents excluded from public school. *Psychology in the Schools*, April 1976, *13*, 185-191. (V-11)

Reports outcomes (school return and academic achievement) of a contingency based contracting program covering teacher/school and parent/home behaviors. A total of 44 boys participated over a 2-year period.

525. STEIN, HARRY H. The muckraking book in America, 1946-1973. *Journalism Quarterly*, Summer 1975, *52*, 297-303. (III-2)

Examines 10 publications since World War II and compares issues dealt with and beliefs expressed in them with those in pre-World War II books.

526. STENNER, A. JACKSON, & KATZENMEYER, WILLIAM G. Self concept, ability, and achievement in a sample of sixth grade students. *The Journal of Educational Research*, March 1976, *69*, 270-273. (IV-15)

Includes self concept test scores in an equation predicting academic achievement in 6 areas including reading. The 225 sixth grade subjects also took verbal and non-verbal ability tests.

527. STENNETT, R. G.; SMYTHE, P. C.; & HARDY, MADELINE. Hierarchical organization of reading subskills: statistical approaches. *Journal of Reading Behavior*, Fall 1975, *7*, 223-228. (I)

Reviews and evaluates stepwise multiple regression, factor analysis, cluster analysis, scaling methods, analysis of variance and transfer designs as potential tools in research on the structure and order of reading subskills.

528. STEWIG, JOHN WARREN, & KNIPFEL, MARY LYNN. Sexism in picture books: what progress? *The Elementary School Journal*, December 1975, *76*, 151-155. (III-2)

Analyzes 100 books published between 1972 and 1974 to determine how realistically recent books deal with women's roles. Compares findings to a 1972 study.

529. STOLUROW, K. ANN COLEMAN. Objective rules of sequencing applied to instructional material. *Journal of Educational Psychology*, December 1975, *67*, 909-912. (IV-13)

Investigates the effect of varying relevant variables (part of speech), irrelevant variables, or both on errors and time spent identifying nouns, verbs, or adjectives embedded in simple sentences. Data from 105 second graders were analyzed by sequence type, mental age, and pretest scores on the same test as the post test.

530. STOODT, BARBARA D., & IGNIZIO, SANDRA. The American Indian in children's literature. *Language Arts*, January 1976, *53*, 17-21. (III-2)

Summarizes an evaluation of 70 children's books published since 1930 using criteria such as authenticity of customs, realistic illustrations, individualistic or stereotyped portrayal of native Americans, and story credibility.

531. STRICKLER, DARRYL. A systematic approach to teaching decoding skills. In Brother Leonard Courtney (Ed.) *Reading interaction: the teacher, the pupil, the materials*. Newark, Delaware: International Reading Association, 1976. Pp. 49-57, (II)

Compares precourse and post course teaching behavior of 16 teachers who took a minicourse; compares their teaching behavior with that of 17 control teachers, and compares reading gains of the experimental and control teachers' pupils, 230 first, second, and third graders.

532. SUNSHINE, PHYLLIS M., & DIVESTA, FRANCIS J. Effects of density and format on letter discrimination by beginning readers with different learning styles. *Journal of Educational Psychology*, February 1976, *68*, 15-19. (IV-15)

Analyzes the relationship between reflective-impulsive, field dependent/independent learning styles and matching-to-sample performance. Subjects were 40 first graders randomly assigned to one of 4 stimuli presentations: horizontal/vertical and high/low density of letterlike forms.

533. SWENSON, INGRID, & FRY, MAURINE A. Intra- and intermodal word-recognition cues: a reassuring methodological note. *Perceptual and Motor Skills*, October 1975, *41*, 603-606. (IV-4)

Uses matching tasks involving pronounceable trigrams presented visually or orally to investigate the relationship of reading achievement to task mode and sex. Subjects were 32 female and 32 male first graders in a middleclass suburban school system.

534. SYMULA, JAMES F. The Fredonia migrant tutorial reading program. *Reading Improvement*, Summer 1975, *12*, 66-70. (V-11)

Reports results on reading achievement of a 3-county program after 1 year of small group tutoring of 250 migrant children.

535. TAIWO, OLADELE. Cultural relevance of reading materials. In Donald Moyle (Ed.) Reading: what of the future? *Eleventh annual conference of the United Kingdom Reading Association*. London: Ward Lock Educational, 1975. Pp. 261-266. (IV-16)

Analyzes questionnaire responses from 80 of 85 schools surveyed in Lagos, Nigeria, regarding the relationship of children's reading books to their home life experiences.

536. TAN, ALEXIS S. Exposure to discrepant information and effect of three coping modes. *Journalism Quarterly*, Winter 1975, *52*, 678-684. (III-14)

Compares pretreatment and post treatment self-reported attitudes toward abolition of capital punishment from 288 introductory communications students who read an argument on the issue ostensibly from one of 2 sources pretested as high and low in credibility. Analyzes subjects' detection of inconsistencies.

537. TEBBEL, JOHN. *The media in America*. New York: Thomas Y. Crowell, 1974. (I)

Synthesizes the history of newspapers, books, magazines, and broadcasting from colonial days on. Emphasizes their roles in wars, political, social, and cultural evolution of the nation, interaction among media, and the effect of technological development.

538. THOMAS, LAURIE F., & AUGSTEIN, E. SHEILA. Reading to learn. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 147-157. (IV-10)

Examines the relationship of reading pattern recorded while reading to comprehension of the material tested immediately and 2 weeks later. Subjects were 2 matched groups of 30 readers. One group expected to summarize the material; the other expected a multiple choice test. Both groups took both tests.

539. THOMPSON, G. BRIAN. Sex differences in reading attainments. *Educational Research*, November 1975, *18*, 16-23. (I)

Reviews research of effect of sex differences on reading attainment of English-speaking children. Considers the origins of such differences as are found to exist.

540. THOMSON, M. Laterality and reading attainment. *British Journal of Educational Psychology*, November 1975, *45*, 317-321. (IV-17)

Compares laterality findings assessed observationally on 60 retarded readers from 4 primary schools with those on a group of average or above average readers from the same schools.

541. THOMSON, M. E. A comparison of laterality effects in dyslexics and controls using verbal dichotic listening tasks. *Neuropsychologia*, 1976, *14*, 243-246. (IV-17)

Compares cerebral dominance for dichotically presented digits, 1-syllable words, reversible words, and reversible nonwords. Subjects were 20 children with specific reading disability, ages 9 to 12, and 20 matched controls.

542. THORÉN, STIG. The news cycle: variations in the flow of foreign news to news agencies and newspapers in Sweden. *Psykologiskt Forsvar*, Stockholm, 1972. (III-12)

Analyzes material in 3 Swedish dailies during 1-week periods in each of 4 years to assess the impact of different closing times and ordinary wire service presentation cycles on the publication of foreign news.

543. THORNDIKE, ROBERT L. Reading comprehension in fifteen countries. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 500-507. (I)

Reports results of various cross national studies of reading under headings of individual differences, predictability of achievement, reading preferences, sex differences, between-country differences, and between-school differences.

544. THORSON, GARY. An alternative for judging confusability of visual letters. *Perceptual and Motor Skills*, February 1976, *42*, 116-118. (IV-6)

Tabulates numerical values of gross overlap of distinctive features of the 26 capital letters, supported by a previous study of reaction time when judging letter pairs.

545. TIERNEY, ROBERT J. A comparison of Australian and American reading teachers. In John E. Merritt (Ed.) New Horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976. Pp. 537-549. (II)

Reports observational and test findings of teachers' instructional behaviors and knowledge of reading instruction. Subjects were a random selection of 15 teachers each in grades 2 and 3 from 30 schools in the St. George area, Sydney, and 30 schools in DeKalb County, Georgia.

546. TILLMAN, CHESTER E. Personality types and reading gain for Upward Bound students. *Journal of Reading*, January 1976, *19*, 302-306. (IV-15)

Examines relationships of scores on a personality test to initial and residual gains reading scores for 50 senior high school students in a 6-week individualized, counseling oriented, college bound program.

547. TITTLE, CAROL KEHR; MCCARTHY, KAREN; & STECKLER, JANE FAGGEN. *Women and educational testing: a selective review of the research literature and testing practices*. Princeton, New Jersey: Educational Testing Service, 1974. (I)

Analyzes content of several standardized achievement and occupational interest tests regarding sex-role stereotyping and language usage. Reviews studies on discrimination against women in testing and surveys text books regarding discussions of the technical problems of sex bias in testing.

548. TRACHTMAN, JOAN P. Cognitive and motivational variables as predictors of academic performance among disadvantaged college students. *Journal of Counseling Psychology*, July 1975, *22*, 324-328. (IV-15)

Assesses the validity of academic achievement and personality tests as predictors of grade point average. Subjects were 106 first year college students in a compensatory education program.

549. TRAVERS, JEFFREY R. Word recognition with forced serial processing: effects of segment size and temporal order variation. *Perception & Psychophics*, August 1974, *16*, 35-42. (IV-9)

Tests a parallel versus a serial model of processing words through screen presentation of letters under 8 conditions—4 degrees of temporal overlap from none to whole word, with and without masking. Subjects were 10 paid Harvard/Radcliffe student volunteers.

550. TREPPER, TERRY STEVEN, & ROBERTSON, DOUGLAS J. The effects of i.t.a. on the reading achievement of Mexican-American children: a follow-up. *Reading Improvement*, Fall 1975, *12*, 177-183. (V-5)

Retests 37 Mexican-American bilingual fifth graders on a standardized reading test to see if gains reported 1½ years previously of the initial teaching alphabet over traditional orthography were sustained. Also tests another 255 second, third, and fifth graders to determine the effectiveness of i.t.a.

551. TUINMAN, J. JAAP; BLANTON, WILLIAM E.; & GRAY, GORDON. The cloze procedure: an analysis of response distributions. *The Journal of General Psychology*, April 1975, *92*, 177-185. (IV-8)

Administers 5 versions of a fifth-word deletion cloze passage (thus omitting all words at least once) to 390 junior high school students. Calculates probability of success guessing the word and, for nouns only, its relationship to word types in the classes of syntactically and semantically acceptable and unacceptable guesses.

552. TUINMAN, J. JAAP; BLANTON, WILLIAM E.; & GRAY, GORDON. A note on cloze as a measure of comprehension. *The Journal of Psychology*, July 1975, *90*, 159-162. (IV-8)

Hypothesizes that cloze measures local redundancy. Tests 180 seventh graders using cloze procedure of comprehension questions on an unaltered passage and 2 versions reduced by deletion of function words.

553. TUINMAN, JAAP; ROWLS, MICHAEL; & FARR, ROGER. Reading achievement in the United States: then and now. *Journal of Reading*, March 1976, *19*, 455-463. (I)

Analyzes data from the literature in which changes in reading performance were reported, reading achievement records in public schools, and statewide reading achievement records to investigate shifts in literacy. Discusses limitations of such information.

554. UNESCO PRESS. *The experimental world literacy programme: a critical assessment*. Paris: Author, 1976. (I)

Uses data from various sources, primarily original reports, to describe and analyze the Experimental World Literacy Programmes in 11 third world countries. Discusses problems, results, and costs.

555. VACCA, RICHARD T. The development of a functional reading strategy: implications for content area instruction. *The Journal of Educational Research*, November 1975, *69*, 108-112. (V-6)

Uses standardized and author-constructed reading and social studies tests to evaluate the use of reading guides as aids to student recognition of organizational patterns and interpretation of social studies texts. Randomly assigned 4 seventh grades to instructional groups varying in emphasis on content and process.

556. VANDEVER, THOMAS R., & NEVILLE, DONALD D. Transfer as a result of synthetic and analytic reading instruction. *American Journal of Mental Deficiency*, March 1976, *80*, 498-503. (IV-9)

Uses a contrived alphabet to teach "reading" and compare transfer of 2 types of training. Subjects were 50 educable mentally retarded and 50 normal children randomly assigned in pairs to whole-word or parts-to-whole word teaching methods.

557. VANMETRE, PATRICIA D. Syntactic characteristics of selected bilingual children. *Claremont Reading Conference 38th Yearbook*, 1974, 102-108. (IV-8)

Uses 4 syntactic constructions to compare linguistic competencies of urban bilingual third graders drawn from the top and bottom quartiles on a standardized achievement test with a matched group of monolinguals.

558. VAUGHAN, JOSEPH L., JR. The effect of interest on reading comprehension among ability groups and across grade levels. In George H. McNinch & Wallace D. Miller (Eds.) Reading: convention and inquiry. *Twenty-fourth Yearbook of the National Reading Conference*, 1975. Pp. 172-176. (IV-10)

Analyzes the relationship between stated interest in selected passages of appropriate readability levels and post-reading cloze tests. Subjects were 288 students in grades 4, 6, 8, and 11, randomly selected from good, average, and poor readers (24 per group).

559. VELLUTINO, FRANK R.; STEGER, JOSEPH A.; DESETTO, LOUIS; & PHILLIPS, FORMAN. Immediate and delayed recognition of visual stimuli in poor and normal readers. *Journal of Experimental Child Psychology*, April 1975, *19*, 223-232. (IV-6)

Compares immediate, 24 hour, and 6 months' retention of Hebrew letters by normal and poor readers unfamiliar with Hebrew and good readers familiar with Hebrew. Subjects included 42 children in each group from second, fourth, and sixth grades.

560. VENEZKY, RICHARD L. The curious role of letter names in reading instruction. *Visible Language*, Winter 1975, *9*, 7-23. (I)

Summarizes history and selected research on the relationship between learning to read and knowledge of letter names with and without formal training.

561. VENKATESAN, M., & LOSCO, JEAN. Women in magazine ads: 1959-71. *Journal of Advertising Research*, October 1975, *15*, 49-54. (III-2)

Categorizes roles of women portrayed in 14,378 advertisements in magazines aimed at male, female, and general readers. Compares findings from 3 periods: 1959-1963, 1964-1968, and 1969-1971.

562. VILANILAM, JOHN V. Ownership versus developmental news content: an analysis of independent and conglomerate newspapers of India. *Gazette: International Journal for Mass Communications Studies*, Spring 1976, *22*, 1-17. (III-12)

Provides a systematic quantitative analysis of developmental, governmental and political news. Analyzes 4 newspapers: *Aj* (Hindi), *Hindu* (English), *Malayala Manorama* (Malayalam) and *Times of India* (English).

563. VINCENT, JERRY; BRIGHT, R. LOUIS; & DICKASON, JULIET BUSSEY. Effects of the WIST reading readiness program on

first grade readiness and later academic achievement. *The Journal of Educational Research*, March 1976, *69*, 250-253. (V-4)

Compares standardized reading tests scores of disadvantaged children at entry into first grade and ending second, and third grade. Half of the 124 children had attended a preschool program.

564. VON STOCKERT, THEODOR RITTER, & BADER, LUISA. Some relations of grammar and lexicon in aphasia. *Cortex*, March 1976, *12*, 49-60. (VI)

Investigates verbal behavior in Broca's aphasics, Wernicke's and total aphasics. Weighs amount of grammatical and lexical capacity while performing a sentence ordering task. Subjects include 30 German aphasic patients varying in age from 17 to 65 years.

565. VROEGH, KAREN. Sex of teacher and academic achievement: a review of research. *The Elementary School Journal*, April 1976, *76*, 389-405. (I)

Reviews the literature on the relationship of teacher sex to academic achievement, responses to boys and girls, and to pupils' perceptions of teachers, and on masculinity of male teachers.

566. VUKELICH, CAROL; MCCARTY, CHARLOTTE; & NANIS, CLAIRE. Sex bias in children's books. *Childhood Education*, February 1976, *52*, 220-222. (III-2)

Compares the activities, roles, and relative importance assigned to males and females in 22 picture books dealing with human qualities identified by 21 teachers as "favorite picture books used with children."

567. WACKMAN, DANIEL B.; GILLMOR, DONALD M.; GAZIANO, CECILIE; & DENNIS, EVERETTE E. Chain newspaper automony as reflected in presidential campaign endorsements. *Journalism Quarterly*, Autumn 1975, *42*, 411-420. (III-11)

Estimates the effect of the profit drive in the newspaper industry on editorial endorsement of presidential candidates. Uses previously compiled data on the last 4 elections to test the hypothesis that chain-owned newspapers are not homogeneous in their endorsements.

568. WALKER, HILL M., & HOPS, HYMAN. Increasing academic achievement by reinforcing direct academic performance and/or facilitative non-academic responses. *Journal of Educational Psychology*, April 1976, *68*, 218-225. (V-5)

Analyzes the relationship of a 3-month intervention program of reinforcing appropriate study behavior, academic performance, or both to actual behavior and achievement. The 48 primary grade subjects were drawn in pairs and randomly assigned to control or one of the 3 experimental groups.

569. WALKER, LAURENCE. Comparative study of selected reading and listening processes. In Robert T. Williams (Ed.) *Insights into why and how to read*. Newark, Delaware: International Reading Association, 1976. Pp. 39-46. (IV-4)

Investigates the effectiveness of reading and listening processes. Uses 3 independent samples of 48 grade 11 students randomly divided into 2 treatment groups each.

570. WALKER, LAURENCE. Newfoundland dialect interference in oral reading. *Journal of Reading Behavior*, Spring 1975, *7*, 61-78. (IV-8)

Compares oral reading of third graders reading standard English material containing validated syntactic structures of the local dialect (N = 60).

571. WARD, JEAN, & GAZIANO, CECILIE. A new variety of urban press: neighborhood public-affairs publications. *Journalism Quarterly*, Spring 1976, *53*, 61-67, 116. (III-11)

Compares functions of 23 neighborhood publications in Minneapolis and St. Paul with community press determined by circulation data, content analyses, and interviews of journalists.

572. WARNER, DELORES. Pupilization of the instructional program. *Reading Horizons*, Winter 1976, *16*, 97-103. (V-10)

Compares actual gain with predicted gain on standardized academic achievement tests of 16 boys and 14 girls following 1 year of an experimental individualized instructional program. Subjects were third and fourth graders in a Title I school.

573. WARREN, ANN, & FREDERICK, E. COSTON. A comparative study of attitudes of first grade children in two reading programs—individualized and basal. *Reading Horizons*, Summer 1975, *15*, 189-197. (V-5)

Modifies the semantic differential technique to construct a measure of attitude toward reading. Compares results from 53 children in individualized programs with results from 45 children in basal reader programs. Their 7 teachers were considered outstanding.

574. WATSON, SUSAN, & CLAY, MARIE M. Oral reading strategies of third-form students. *New Zealand Journal of Educational Studies*, May 1975, *10*, 43-51. (IV-11)

Examines the relationship of accuracy, errors, types of errors, rate, and self-correction in reading graded paragraphs aloud to level of silent reading ability in 232 urban Auckland children of skilled and semi-skilled workers.

575. WATT, W. C. What is the proper characterization of the alphabet? I. Desiderata. *Visible Language*, Autumn 1975, *9*, 293-327. (I)

Reviews analyses of cursives and printed majescules based on visual recognition and discrimination studies to show how psychological evidence indicates that alphabetic symbols have "relative suitability," *i.e.*, are homogeneous.

576. WATTS, GRAEME H. The effect of adjunct questions on learning from written instruction by students from different achievement levels. *The Australian Journal of Education*, March 1975, *19*, 78-87. (IV-5)

Analyzes relationships of achievement level, presence or absence of adjunct questions, and questions requiring literal recall or integration of information to reading comprehension. Subjects were 96 sixth graders from the highest and third tracks in a 4-track Sydney school.

577. WEAVER, DAVID H., & MULLINS, L. E. Content and format characteristics of competing daily newspapers. *Journalism Quarterly*, Summer 1975, *52*, 257-264. (III-2)

Analyzes editorial content, coverage of 5 selected issues, and front page format of 46 newspapers in 23 cities having separately owned publications. Compares higher and lower circulation papers.

578. WEINSTEIN, NEIL D. Effect of noise on intellectual performance. *Journal of Applied Psychology*, October 1974, *59*, 548-554. (IV-10)

Uses analysis of covariance to assess the effect of noise on proof-reading. Subjects were 33 introductory psychology students randomly assigned to either the noise or the quiet condition.

579. WEINTRAUB, SAMUEL; ROBINSON, HELEN M.; SMITH, HELEN K.; PLESSAS, GUS P.; ROSER, NANCY L.; & ROWLS, MICHAEL. Summary of investigations relating to reading, July 1, 1974, to June 30, 1975. *Reading Research Quarterly*, 1975-1976, *11* (*3*), 223-563. (I)

Summarizes 558 published research reports in reading. Includes an annotated bibliography.

580. WHALLEY, PETER C., & FLEMING, RICHARD W. An experiment with a simple recorder of reading behavior. *Journal of Applied Programming Learning and Educational Technology*, March 1975, *12*, 120-124. (IV-13)

Uses a computer monitored joy-stick controlled torch in a darkened environment to track reading behavior with minimal constraints on reader or material. Four electronics students read the same article with varied placement of diagrams and subjectively assessed clarity, complexity, and their understanding of the text.

581. WIIG, ELISABETH H., & ROACH, MARY ANNE. Immediate recall of semantically varied "sentences" by learning-disabled adolescents. *Perceptual and Motor Skills*, February 1975, *40*, 119-125. (IV-8)

Compares the effects of differences in semantic and syntactic constraints on immediate recall of "sentences" by 30 learning disabled and 30 academically achieving 12 to 16 year olds whose IQ's ranged from 87-130.

582. WIIG, ELISABETH H., & SEMEL, ELEANOR M. Productive language abilities in learning disabled adolescents. *Journal of Learning Disabilities*, November 1975, *8*, 578-586. (IV-8)

Assesses and compares accuracy and speed with which 32 learning disabled and 32 matched normal adolescents, ages 12-16, a) named verbal opposites, pictorial presentations, and members of 3 classes; b) produced sentences when given stimulus words; and c) defined words.

583. WILLIAMS, JOANNA. Training children to copy and to discriminate letterlike forms. *Journal of Educational Psychology*, December 1975, *67*, 790-795. (IV-6)

Tests the relative effectiveness of tactile-kinesthetic versus visual discrimination training on testing mode. Subjects were 40 black, lower-class 4 and 5 year olds randomly assigned to learn 3 letter-like forms by either copying, matching, both, or neither condition and tested on the same and other stimuli in both modes.

584. WILLIAMS, PEGGY E. Diagnostic procedures. Auditory discrimination: differences versus deficits. In William D. Page (Ed.) *Help for the reading teacher: new directions in research*. National Conference on Research in English, ERIC Clearinghouse on Reading and Communication Skills, National Institute of Education. Pp. 91-100. (IV-7)

Compares auditory discrimination as measured by a standardized test and a specially constructed test reflecting characteristics of "lower class" speech patterns. Subjects were 48 black fifth graders reading at average or above average levels.

585. WILLIAMS, PHILLIP. Early reading: some unexplained aspects. In John E. Merritt (Ed.) New horizons in reading. *Proceedings of the Fifth IRA World Congress on Reading*, 1976, Pp. 292-299. (IV-9)

Reports a developmental reading study of 32 boys and 32 girls, half from schools in disadvantaged areas. The children's word recognition skills were tested every 3 to 4 months, beginning in infant school, over a 3-year period.

586. WILSON, RICHARD C., & EINBECKER, POLLY GODWIN. Does reading ability predict college performance? *Journal of Reading*, December 1974, *18*, 234-237. (IV-13)

Uses multiple regression to predict freshman GPA from twelfth grade reading achievement. Subjects were 898 students in 4 junior colleges.

587. WIRTENBERG, THELMA J., & FAW, TERRY T. The development of learning sets in adequate and retarded readers. *Journal of Learning Disabilities*, May 1975, *8*, 304-307. (IV-5)

Uses a learning-to-learn paradigm to compare the performance of adequate (N = 30) and retarded (N = 30) readers at age levels 8 and 12 on learning to abstract a relevant dimension (word) from an irrelevant dimension (color, size, style, position) and to generalize to a new problem. All subjects were boys.

588. WITTROCK, M. C.; MARKS, CAROLYN; & DOCTOROW, MARLEEN. Reading as a generative process. *Journal of Educational Psychology*, August 1975, *67*, 484-489. (IV-9)

Hypothesizes that learning and retaining new vocabulary is facilitated by familiar context. Subjects were 468 fifth and sixth graders classified by reading ability and randomly assigned to read familiar or unfamiliar stories containing low frequency words.

589. WOLFE, DENNY T., JR., & SHUMAN, BAIRD. Poetry in secondary schools: reading, analysis, and response. *Reading Research Quarterly*, 1975-1976, *11* (2), 168-192. (IV-10)

Analyzes free descriptions of the literal meanings of 2 poems and answers to 7 questions about the poems and poetry written by high ability tenth and twelfth graders (N = 48).

590. WONG, MARTIN R. Additive effects of advance organizers. *Journal Structural Learning*, 1974, *4*, 165-173. (IV-5)

Compares post treatment short- and long-term retention of an essay by 4 groups of introductory psychology students (N = 123); those receiving an advance organizer plus a lecture, advance organizer only, lecture only, or no-treatment.

591. WRAY, ROSEMARY H., & TEASDALE, G. R. Australian use of the ITPA. *Australian Psychologist*, July 1975, *10*, 157-162. (I)

Provides a 68-item bibliography of Australian research using an individual test often employed in conjunction with reading and reading disability.

592. WROLSTAD, MERALD E. A manifesto for visible language. *Visible Language*, Winter 1976, *10*, 5-40. (I)

Draws on the conclusions of philosophers and researchers in psychology, linguistics, anthropology, and archeology to support the contention that written language is at least as basic as spoken language.

593. Yamadori, Atsushi, & Ikumura, Goro. Central (or conduction) aphasia in a Japanese patient. *Cortex*, March 1975, *11*, 73-82. (IV-1)

Investigates the relationship of word length to pronunciation and writing in a 66-year-old stroke victim. Stimuli were presented visually (Kana, Kanjii, and drawings) and orally. The patient attempted to read aloud, repeat after the examiner, point to the stimulus named, copy, and transcribe from dictation.

594. Yawkey, Thomas D., & Yawkey, Margaret L. An analysis of picture books. *Language Arts*, May 1976, *53*, 545-548. (III-2)

Compares sexist, racist, and socioeconomic stereotyping and story location in young children's picture books prior to and after 1965. Rates 26 books prior to 1965 and an equal number after 1965.

595. Young, Beverly S. A simple formula for predicting reading potential. *The Reading Teacher*, April 1976, *29*, 659-661. (IV-3)

Uses the product of IQ and grade level to estimate expected reading level. Compares estimates from 3 formulas at second and fourth grade for IQ's from 60 to 170.

596. Young, I. Louis, & Cormack, Peter H. The relationship of the WISC to the revised ITPA in emotionally disturbed children. *Psychology in the Schools*, January 1974, *11*, 47-51. (IV-3)

Investigates the relationships between the WISC and ITPA for their ability to assess cognitive and emotional functioning in 78 severely disturbed subjects ranging in age from 6 to 11.

597. Yule, William; Berger, Michael; Rutter, Michael; & Yule, Bridget. Children of West Indian immigrants-II. Intellectual performance and reading attainment. *Journal of Child Psychology and Psychiatry*, January 1975, *16*, 1-17. (IV-16)

Uses a 2-stage epidemiological approach invoking group and individual assessment of intelligence and reading achievement of 10 year olds analyzed by place of birth of parents and children. Subjects included 1,689 indigent and 592 non-indigent school children.

598. ZIMET, SARA GOODMAN. Reader content and sex differences in achievement. *The Reading Teacher*, May 1976, *29*, 758-763. (I)
Suggests motivational sources of reading achievement based on findings in several studies of achievement in which the basal series was varied.

599. ZIROS, GAIL I. Language interference and teaching the Chicano to read. *Journal of Reading*, January 1976, *19*, 284-288. (I)
Discusses findings in studies of linguistics, bilingualism, socioeconomic variables, and learning to read.

National Reading Conference
27th Annual Meeting,
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